Technology/Big Data
HOD Recorder Workbook Comments Summary

Fall 2019 House of Delegates Meeting

October 25, 2019

These are the notes that were captured during the actual delegate discussions at the HOD meeting and have not been edited.

Day 1: Friday, October 25
Dialogue #1: Data Sets

Question 1: Within your practice area, what data sets do you currently use?

- Business and Industry (Examples)
  - SPINS/IRI natural and specialty foods database
  - Contracts with private company on trends to determine menus using data-driven selections, purchases, and consumers beliefs and behaviors
  - Information from Nielson, Datassenital, GfK MRI, and Yelp
  - Retail Point-of-Sale Data

Table 3
- Social media (Twitter) data about how many times consumers use hashtags and searches. Ways to partner with consumers using social media and why they chose certain products. Also products in combinations. Possibly can be combined with clinical data in the future. How can we take consumer choices and be able to use them in dietetic practice.
- Consumer insights data and NHANES for public comments in nutrition.
- Marketing is obsessed with consumer purchasing- is it really what the consumer wants or is it what we think they want. (Nestle)
- Eye tracking data on food products on shelves in stores.
- Going in aisles and picking up products to see what’s out there and being able to communicate with clients about current products, preferences, etc.
- Making sure sources are reputable-have database of reliable people/sources that companies use- can see information about people in the database. Can pull any information out of the database-public knowledge.

Table 4
- Demographic of the neighborhood for food marketing
- END
- PES statement
- EHR
- Registries - Medical care and Nutrition care
- Epic systems
- Malnutrition screening tool
- MQII
Table 5
Weight Management DPG - Mayra Roman
- Virtual Health
- Move coach
- My fitness pal
- HEDIS
- Computation
- Outlook and Excel

Table 6
- CMS databases (Medicare claims), input data from smart pumps and health care settings
  - instead of nurse taking down info and inputting, automatic input machine
  - kidney failure vitals
- proprietary databases such as Premier
- Prescription drug data
- AHRD database
- Sales data for company products
- Nielsen
- data essentials-Rutgers

Table 8
- Point-of-Sale Data for non-retail
- POS for billing contractors or clients
- Customer or client cards
- Mintal - product trends around world
- Nielsen home scan
- Digital box tops

Table 10
- Track trends from purchasing of customers
- Software- field view
- Scanning codes tracking information

Table 12
- CVS: data interfaces do not talk to hospitals or doctor’s offices or clinics // updates coming but not yet/EPIC used (one of the biggest platforms) throughout CVS → Minute Clinic // CVS wants to get their hands on everything → Virtual medicine (help in rural areas), drones being used to deliver medicine.
  - Are we replaceable? No - we still need to be the one who is interpreting this data and applying it properly?
- We need to be the ones behind the Apps → get jobs at Tech companies designing and encouraging the evidence - based research on the apps
- MBA was more useful than MS in nutrition → teach those tools and those concepts. We need more than just TPN and calorie counts...because we do more.

Table 13
- Datassential - produce companies look at restaurant data to increase crops. Taylor Farms uses AI to identify weather patterns to assess whether crop will be slower and how other areas can meet their needs.
- Companies with Benefit programs (AVI?) - If you sign up, you get free things (vitamins, probiotics, etc.). This data is collected: what they get, how often they order, address, how often they’re renewing scripts (for enzymes for example).
- Downside of this it makes patients uncomfortable because their refills are being tracked.
- Quality improvement - data use agreements, legal risks implications.
- Clinical and PH nutrition data, immunization registries - they’re all under several layers of data. Can be overwhelming.
Table 14
- Consultant for Oncology - weight loss and notifies if consultation is needed, weekly
- Lab values, medications they’re on, track how often prescriptions filled, place where you could download recipes for x amount of people

Table 15
- Corporate health and wellness looks at various health records to determine costs
  - The cost looks at health plans, PHI (personal health information), and health data on employees
  - Uses data to integrate health and wellness programs with cost
- Apps collect data for safety on college campuses

Table 16
- looking at regional purchasing patterns
- using data to assess how a business is functioning and how they can better improve
- TSI - clinical data

- Clinical Nutrition (Examples)
  - Timeless Medical Human Milk/Formula Bar Code Scanning System database to mine internal data for product information.
  - CBORD Food Service database for nutrient information and internal data mining.
  - Nestle and Abbott Product Guides - all via apps
  - Claims and encounters, HIE, as well as EHR data for HEDIS, Clinical Quality Measures (CQMs), and utilization/population health management

Table 1
- data used to see what snacks patients child patients are eating and how to implement healthier snacks so they move on with the same behavior in the outside environment
- Data can help to collect current trends and choices to help change behavior
- Seminars for drs. all plant-based, teaching drs. how to do it and partner with the humane society to learn more-area expanding and growing: a partnership with big data could really make this growing
- Worldwide big data to help health outcomes
- consumers are looking at satisfaction scores to compare hospitals, drs, satisfaction: treatments will be exposed on how sessions went
- consumers are coming in with their own ideas of supplements and diets to help cure their own ailments: makes things a bit more difficult to practitioners
- food insecurity data and diet preferences: knows to do a grocery list to contact local grocery store and deliver the food to their home or send food home with them that they will enjoy and eat to help prevent malnutrition

Table 2
- Interpreting lab results
- Ordering meds etc.
- “All Of Us” research program
  - try to collect data from 1 million people,
  - this is done completely by volunteering
  - they want to use the data from participants to do standardized questionnaires and to intercept lab records
  - some places are being reluctant with this because they do not want to share their data
  - this could ultimately help to guide the clinical practice
- Electronic health record (at the VA)
  - breaks down all things the RD did with the patient,
    - Looking at labs, consultations, vitals, etc.
  - write a statement and you have to use the words exactly as they are written
  - look at all data all day every day.
    - to make sure everyone is doing their jobs and to make sure the patient is getting the best quality care
- Timeless Medical Human Milk/Formula Bar Code Scanning System database to mine internal data for product information.
- CBORD Food Service database for nutrient information and internal data mining.
- Nestle and Abbott Product Guides - all via apps
- Claims and encounters, HIE, as well as EHR data for HEDIS, Clinical Quality Measures (CQMs), and utilization/population health management

Table 3
- Tablets to plan meal times and meals for patients. Track nutrition interventions and data for what patients select.

Table 4
- Malnutrition
- Readmission
- CMS
- Electronic medical record and transition to electronic medical records
- Quality incentive standards for Medicare diabetes (insurance)
- Nutrient database analysis
- HER
- MSD – Min data set --> CMS: Quality of care provider

Table 5
- Databases:
  - CBORD
  - Meditech
  - Sorian (at hospital)
  - Quality tech does tracking on patients
  - Virtual Health
  - EPIC
  - All Scripts
  - WINS
  - WHEL
  - Framing
  - Database for patient care materials
  - Multiple genetics database
    - Track pts coming in with specific disease markers
- apps/tools
  - My Fitness Pal
  - Run Keeper
  - Amazon images and picture finder; amazon shopping for product reference
    - Patient education of products and what an item looks like
  - Apple health app
- Manuals:
  - IDNT
  - Nutrition Care Manual

Table 6
- EMR
- QI indicators from CMS weight changes- compare individual facilities to statewide, nationwide
- Pressure Injury
- Falls
- Hydration
- Malnutrition
- Enteral nutrition

Table 7
o Tube Feeding Infinity Pump Devices, MRI data, ultrasound devices, medical test/exam results
o Personal Health Record
o Nutrition app sharing between client and dietitian and then to personal health record
o Nutrition apps to send data on food intake trends
o More detailed nutrition apps/logs such as ESHA to be more user friendly
o Fluid intake apps and “smart bottles” data
o Improved “registries” for nutrition data similar to USRDS, NHANES, national cancer institute etc. Accrediting bodies/CDC accredited programs → data collection

Table 8

<table>
<thead>
<tr>
<th>EMR (e.g. EPIC)</th>
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<tbody>
<tr>
<td>Nutrient Analysis</td>
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<tr>
<td>Improve Care Now (ICN) for pediatric nutrition, PowerUp, QMS (for dialysis)- used to compare data for nutrition outcomes and practices to other centers across the county</td>
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Table 9

| Employee wellness data- good but a little apprehensive about it too, since it can potentially affect benefits, insurance premiums, indirect discrimination for hiring |
| Eating disorder clinic: Primary collection is at intake, includes mental health data such as body self-image and diagnoses. |
  | While in program: Biometrics, making sure they are medically stable, RD looks particularly at weight, once they reach target weight, weight becomes what foods are you still fearful of compared to food choices. It’s more of a conversation behind why is the patient still fearful of carbohydrates, etc. Data is more narrative data than statistical. |
  | If we had long-term post data after patients left, it would be helpful to define success. But in EDs, hard to define success because even if they are able to maintain weight, they could have other issues not captured such as they could have other worsening mental health issues. Or on paper patient could be 80% IBW but they are now able to hold a job and relationship even though their data doesn’t suggest that. Hard to determine what data is beneficial in that situation. |
  | Paper charts- when patients come in, there is a survey. It is more narrative, i.e. word associations |
  | Clinic tracker- mental health therapist-focused EMR |
  | Social media trends- monitor for what patients may be hyper focused on |
  | Need more research in this area and AI might help. Allows us to gather data and then see underlying patterns. |
  | Have found that for some patients, in school health class they had to track intake and then decide they need to lose weight and develop ED |
| LTC- automatic medication dispenser in the room that alerts staff if med not taken from machine. Also sensors that track where the providers/staff goes and the time provider is in each room |
| Federally Qualified Health Center- the company gets bonuses for every 10% reduction in ER visits or hospitalizations |
  | 6 teams of providers, each team has monthly rounds to discuss how many patients used ER or the hospital, also gives reports on how many members saw RD for first time, went to RD classes, did a follow-up |
  | RD will communicate with other providers to ask if certain patients will benefit from counseling, new lipid panel, etc. |
  | Clinic generates a list of the top 2-3% of members that utilize ER and hospital, and then focus efforts on reducing this. Many of the members are homeless, and they go to ER for warmth in winter, air conditioning in the summer, and also to be fed. |
    | RD given budget for shelf stable food in office to give people when they're out of money and goes through what to buy; to try to reduce ER visits |
  | Original data is from Medicaid |
  | # diabetics that have <8 A1c, goal is to get everyone less than 8 |
    | RD will track how many of these <8 have I seen to determine benefits of RD consult |
  | Pharmacy delivery if patient does not pick up their medication. If someone has not been in at least 90 days, people in outreach search the streets for people, go to the last address, if they moved, look at emergency contact |
• Clinic has shown a decrease in ER visits. i.e. sickle cell pts call the outpatient clinic first rather than going to the ER
  o Cystic fibrosis Center- has a national registry among the other associated CF centers
    • Each center has a number, can look up CF center in any community, can see much info, standardized care, how often they should see RD
      • It is all based on protocol (still individualized)
    • If you went to any center in the country, there is a standard for what you do for every protocol, pulmonary therapies, etc. Has improved avg life expectancy and other chronic disease groups are starting to use that as a model. Continued care between centers in different states.

Table 10
  o Medicaid and Medicare guidelines
  o Compare your demographic numbers to the rest of the country (benchmarks)
  o Track what hospitals or LTC facilities look up do they need more tube feeding formulas etc.
  o Medical records using the same medical practices and codes online

Table 12
  o REMR used, limited - read only access given to school nurses for DM treatment / historic barrier, couldn’t pull data on own, needed someone to manage and
    • breastfeeding data w/ initiatives → saw no changes from 2013-2019 (80% success = high in terms of country)
    • Instead of running reports yearly, they are run monthly to notice actual changes and impacts of new initiatives and implementation.
    • technology opportunity: figure out where the weak points are, then change implementation/initiatives and then re-run reports to notice change.
    • AI would “triage” and we would (as RDs) do the higher level stuff and manage those “big” decisions
      • Rather than do manual calorie counts, our time could be better spent.
    • We have to take the initiative to (not resist it) but really embrace it.
  • Monthly Blog with RDs →
    • done interviews and posts and videos
  • Follow the $$ → Value of RD (important for bottom line)
    • Budget Capitated Lives → we want people to stay out of the hospital- put money in prevention

Table 13
  o Downloads, patient registry data, EMR data. EMR data takes IT a lot to generate. EPIC/CERNER.
  o Population health management tools like Dashboards.
  o Zach - selling de-identified data out to generate more income - treatments for cancer, etc. Patients sign consent, but maybe some don’t understand what they are consenting for.
  o Free meals for patients - what is free and what isn’t. Health and Hospitals Initiative - purchasing data shifts from what patients are getting. Sales of soda dropped when water and diet drinks are free. This generates data on food choices.
  o For diabetics - tracking blood glucose, can help changing insulin doses and time and snacking.
  o Too much data is not always helpful. It needs to be motivating and guiding.
  o TABLEAU - on iPad, 10 questions on quality of life - generate scores. Team meets (all disciplines) and refer patients based on the needs. This system identifies certain information that patients may not talk about. Screening data, data visualization tool. Identifies practices also, which ones best for what.

Table 15
  o Nutrient analysis databases
    • There are issues with access to the current data
  o Is there data to determine the ratio to the RD per the patient population?
  o Databases are used to schedule RDN consultations with patients
  o Electronic Health Record/Medical Records
  o There are Data Warehouses where all data on all patients are in a data set on patients at every specific facility

Table 16
○ HER Use
○ ACCVPR - Cardiac Rehab

● Communications
○ Web and Media Analytics (current headlines, key searches and more)

Table 1
○ Alexa- big data presents a challenge because consumers are asking questions that practitioners have to be prepared to answer

Table 2
○ Dataltitics
  • record every menu used in the facility
  • records what the newest food is and what is coming next in a menu
○ VA
  • executive team looks at customer service online,
  • they do electronic surveys and that is where they get a lot of their info
    ○ did the nurse listen to you etc?
  • compare themselves to other facilities (all VAs or just ones in the surrounding areas)
    ○ they can use this to see how facilities are doing, based on scores and where to see how they can improve
  • track specific physicians down, if they need to get ahold of them
○ Web and Media Analytics (current headlines, key searches and more)

Table 3
○ Job searches/titles- what would be the keywords used in a search to get the best job (LinkedIn)

Table 4
○ Social media- Facebook, Instagram, twitter, etc.

Table 5
○ Web and Media Analytics (current headlines, key searches and more)
○ Electronic medical record
○ Wellness portals - related to participant engagement, programming, registration, monitoring, results, etc.
  Involved in the design, data entry, and data analysis and reporting.
○ Integrated data warehouse to include health, safety, disability, wellness, and other health related data all combined into one data system as coordinated with numerous vendors for the benefit of an employer exploring a total health care cost burden. Involved in the design, data entry, and data analysis and reporting.
○ Productivity apps:
  • Evernote
○ Wellness, fitness, and nutrition apps - stand alone

Table 6
○ Data from social media postings-metrics from blogs, twitter, Facebook, Instagram - social scraping, data mining from feeds

Table 7
○ social media
○ Information sharing and communication between each other: HIE

Table 8
○ Text confirmations
○ Google searches
○ Social media posts and likes
○ Website views
○ Survey Monkey
Facebook patient groups
- Pacify - 24/7 access to a dietitian

Table 12
- Mentioned improper tracking of data → proprietary restrictions limit access to data sets // they know certain pieces of data but not all.
  - Within her position, and other RD roles → we bring all of the pieces together. We may not be the “techy” person, but we need to know how to interpret it and discuss it.
  - “we need to follow the trend” → we need to use our communications skills to pitch what we know
    - get on apps and into the tech world to keep up with apps like my fitness pal/noom etc
    - Get at those tables - be in those conversations!

Table 14
- Regulatory Response Communications - Minority Health
  - Tracking family size, PEW research - US census data usage
  - HHS funded program
  - barcode reading of foods using smartphones to understand food behaviors from minorities
  - United Way
  - County usage of data sets to understand differentials between zip codes, provided by local public health department

Table 15
- Facebook ads, various forms of social media
- Google, google keywords - looks at what people are interested in and what the trends are in order to target ads to consumers

● Community and Public Health Nutrition (Examples)
  - NHANES, BRFSS
  - Claims and encounters, HIE, as well as EHR data for HEDIS, Clinical Quality Measures (CQMs), and utilization/population health management

Table 1
- SNAP data to ensure that people aren't becoming more malnourished even with the help of SNAP benefits because they are still choosing unhealthy options- analytics should follow this information and put it out to the public to make changes to increase education

Table 4
- Carb counting
- Lab work- A1C, glucose, cholesterol
- license data- insurance
- USDA data for rural areas

Table 5
- Retail Point of Sale “Loyalty” Tracking (for corporate view only)
  - Would like more access to this info
- 10% coupon given to patients with lookup number at store level
  - Can track purchases of patients
  - Can also track product movement
- PHRQL (communication)
- Event brite
- HEDIS
- Grocery store apps
- Online shopping
- RPM (retail product management)
  - Driven by UPCs
- “Fresh direct” grocery app used in NY
  - Includes nutrition facts
Table 6
- USDA foods database
- Free and reduced % by school - info is confidential and protected
- Foods they buy are being tracked
- (ADP) average daily participation by school
- Lose it, myfitness pal - customer/crowd sourced data

Table 7
- Social determinants of health
- GIS mapping → food insecurity, food desserts, housing, jobs
- Sharing and connecting between EMR programs

Table 8
- Biosurveillance of epidemiology
- Epidemiological data
- Food assistance programs
- Behavioral Risk Factor
- Census
- Food bank network - Feeding America
- Diabetes prevention program app
- Life expectancy, birth data, mortality, and morbidity data

Table 9
- HIPAA compliant google doc, with no qualifying information to keep track of weights and symptoms. Not something in ED world that accurately describes mental health, it's more weight, what they are eating

Table 10
- Social media and marketing
- Fitness apps and wellness apps
- Facebook

Table 11
- NHANES, BRFSS: These are beneficial for analyzing trends but there are some issues based on populations. The elderly population may not be on board with the change in use of technology.
- Health records such as oncology, death records, and Medicaid data (going from full access to limited access of data). There are great opportunities within government data sets but there is a glare of politics here, which inhibits the process. There is a slight attempt to merge these data sets but there are limitations here based on funding, accessibility, and staffing.
- HRSA: used for screening and health assessment
- Health data is related to accessibility of nutrition, food insecurity, delivery of food, and transportation.
- Insurance companies are doing their own research to analyze patients.
- Area Agencies on Aging
- Claims and encounters, HIE, as well as EHR data for HEDIS, Clinical Quality Measures (CQMs), and utilization/population health management
- Medicare Data
- Medical records: will that eventually be integrated into other data?
- School based data

Table 13
- Humanago 365 - dashboard to track all participants’ activity, food and public health personal lifestyle points. If you don’t do this, they would increase their premiums. Very disturbing to everyone who had to do it. Governor stopped insurance company from doing it. 200,000 lives in West VA. Their intention was for people to get healthier.
The approach to big data is important. One thing is to ask for it, but you need to use it to do something with it - for the better of health.

- **Health Plans** - data is being segmented into socioeconomic information.

### Table 15
- Patient Ping - helps with the transition of care for patients
- Income data (SNAP, etc.) helps with providing assistance to targeted populations
- Point-of-sale data

### Table 16
- USDA - feeding into different apps as well
- NNDR
- NCC -
- CDC
- WHO
- Choose MyPlate
- WIC

- **Consultant (Examples)**
  - Electronic medical record
  - Wellness portals - related to participant engagement, programming, registration, monitoring, results, etc. Involved in the design, data entry, and data analysis and reporting.
  - Integrated data warehouse to include health, safety, disability, wellness, and other health related data all combined into one data system as coordinated with numerous vendors for the benefit of an employer exploring a total health care cost burden. Involved in the design, data entry, and data analysis and reporting.
  - Wellness, fitness, and nutrition apps - stand alone and integrated in the portal.

### Table 3
- Lawsuits about data sets and information to get the right person (credible) for the right job who knows what they are talking about as an expert.

### Table 4
- Electronic medical record
- Wellness portals -
- Noom

### Table 6
- Private practice-weight management, medical records

### Table 7
- Point-of-sale - dependent upon area

### Table 8
- Wellness, fitness, and nutrition apps - stand alone and integrated in the portal.
- Point-of-Sale

### Table 9
- EMR (PCC) systems for meds, weights, supps, diets, food orders, personal preferences, food selections at each meal; utilized by RD who looks at all of it, adjusting for diuretics, if we need to draw labs; starts the steps in the path.
  - For security, some facilities let them access remotely, can see how much someone is working.
  - EMR systems not always integrated, may have to pay for integration for PCC to plug into other systems. Integration can get expensive, it’s sold as if it’s a low cost but it adds up (3 cents per
employee per month per year etc.). Data moving away from servers, it’s on the cloud and who has access to that?
Table 10
- Google

Table 11
- Consulting using AI for business strategies, communications in marketing, and integrative sources of data.
- The Global Food System
- AI used for climate change information (ex: precision agriculture)

Table 13
- Prometheus - uses it in her own private practice for gene identification. 23 and me owns the data.
- WIRE BS

Table 14
- Use of FatSecret by clients, entries get sent. Client must give consent and RD can give feedback. Very user friendly, by client and RD.

Table 15
- Social media, google, google keywords

Table 16
- My Fitness Pal as a form of communication with the patients - for fitness purposes and nutrition to help better guide them

● Education (Examples)
  - MDR ConnectED Cloud
  - USDA DRI, Calorie King, Mediquatios,
  - MyNIU- student portal data (demographics, grades, etc.)
  - Blackboard- student portal: time in, how active they are, can drop students if they have not been active
  - ASCEND- working on portal to monitor trends and others can report in to the same portal to share data, helping to tap into partnerships

Table 2
- fake MER records you can use and can use for education
  - build case studies
  - Simulates medical records
  - if used correctly you could have multiple professional students come in and they can make it more like a real life situation
- Online teaching
  - continuing education program
    - they send emails asking who came to class and it tracks who shows up to online lectures and they use this to help determine who gets financial aid
    - they also use it to see who is doing well in the class and who is not
    - they check to see who is participating in class
    - looking at performance, and to see if who will stay in a program like this and who will not
    - they look for relationships with this
    - in person classes does this as well and they usually do it 3 times per semester this can also determine eligibility for financial aid
- professors are using research data sets to send to students for lectures
- online learning management system
  - track exams, see how your classes are doing compared to others
  - student surveys
- inMDR ConnectED Cloud
- USDA DRI, Calorie King, Mediquatios,
Table 3
- Qualtrix available at universities as well as survey monkey to collect data
- NCPT in teaching and practice
- Using library data sources and resources with librarians about how to find information
- Teaching platforms such as backboard, moodle, canvas etc. for student data.
- Google scholar-how many times something was cited or used. Large reports for articles published by university faculty and creating own datasets.

Table 4
- CDC
- Professional information
- Professional surveys
- NHANES
- 2007 data (outdated) - huge limitation
  - FACULTY searches
  - Targeted appeals to come to their university
  - Search Committee

Table 5
- Research Purposes
  - Food safety in schools
  - Behavioral changes
  - Health information
  - allergyeats.com (dining)
  - Data from:
    - CDC
    - FDA
    - NIH
    - DRI
    - MDR
      - Learning outcomes
      - Currently must pay to query
  - Federal Surveillance
    - BRFSS
    - NHANES
    - Track potential student names for enrollment
- Productivity apps
  - Asana

Table 6
- Student records, demographics
- office of institutional research- majors, program completion, ACEND requirements being met, demographics
- Food processor type programs NHANES and other large government funded data
- electronic course participation-what students have read/completed; number of hours spent on material, in-person classes still based on online portals, grades and files posted- number of logins for course success/progress- association data

Table 7
- USfoods, Sysco
- RD outcomes, RD exam data, school/internship applicant data, graduate data/rates
- Institution data sets and enrollment trends
- Enrollment forecasting

Table 8
- ASA 24
- College dining hall
- SNAPEd
School cafeteria purchases
MyPlate

Table 10
- Follow students what they are using
- Polls for feedback

Table 11
- Used to track student progress, applications of students, online degrees, who clicks on the links? How many people have applied to programs, class progress, graduation dates? In Internship, software is used to track interns’ progress.
- In dietetic internships, CANVAS is used. Certain assignments are tied to student outcomes. Data is collected to rubrics, meeting competencies, etc. Advertisements are also used to promote dietetic internships through technology.

Table 12
- School Nutrition: Lots of Data on students (demographics of school district), POS system that tracked what students selected, helps for future planning, nutrition education, financial decisions
  - Information should be more transferable and able to be more transparent with clients and patients.
    - Often → paperwork and data is repeated within families and between patients that have the same background. Frustrating for patients and clients
    - How do RDs, as not native individuals to the tech world, fit here? How would we fit in this piece?
      - We are late to the party -- we are not the ones behind those apps, and where/how can we insert ourselves here?
    - “We teach RD students how to be a good scientist, but not how to manage or finance or etc…. GO get an MBA vs a MS in Nutrition”
  - Discussed portfolio of students and how to track a student’s experiences and exposure compared to how they come out as RDs and where they practice, how successful they are, etc.
    - Pulling teeth to get students to understand a simple income statement.

Table 15
- Canvas, Blackboard, etc. - Online systems in educational settings provide data to show information based on students.
  - Ex: how long it took to take exams, how long students are on the websites, etc.

Table 16
- Use of Blackboard with Students
  - University of Michigan - NNDR
  - Data for everything about a student, trying to find ways to put them into a major that will fit them best
  - DICAS
  - Faculty profile systems - what the employees have accomplished, classes taught, research they have done.

- Entrepreneurial (Examples)
  - Salesforce (customer database)

Table 2
- There are areas where datasets could collaborate with the data that apple is collecting
  - Dietitians could collaborate with apple as a whole and have access to the health information they have collected and use that information to advance our field.
- Salesforce (customer database)

Table 7
- Point-of-sale, shopping habits
- AI system to take and follow consumer info based on what you “do”, buy, habits, family history, etc. → and can provide personalized recommendations
Table 8
- Insurance
- GIS mapping to determine needs (e.g. food deserts)
- Market share
- Topic dependent

Table 11
- Private practice utilizing social media analytics and tracking of Google data

Table 15
- RDBot
- Google

Table 16
- Data to decrease health care costs across the facility and department

- **Executive Leadership (Examples)**
  - Data to decrease health care costs across the facility and department
  - Data: quality not quantity, based on outcomes, hospital readmissions, value based metrics and outcomes, malnutrition is not currently in there but it should be: this all shows the outcomes and the role of dietitians.

Table 2
- VA
  - Customer satisfaction surveys
  - employee satisfaction surveys
- Data to decrease health care costs across the facility and department

Table 4
- Data to decrease health care costs across the facility and department

Table 7
- Social determinants of health
- Population health
- Employee health
- increased productivity, decreased lost time

Table 8
- Malnutrition coding - EMR
- Biometric screenings
- Customer and employee satisfaction (Press Ganey, HCAHPS)

- **Informatics (examples)**
  - Salesforce (customer database)

Table 3
- Private practice has access to client payments, what diagnosis, policies, family history, financial information, medications, and medical information/records. Medical offices can fax entire charts-more than what was asked for regarding a client. Can see what services they have paid for.

Table 4
- Everything can be a data set
- Likert scales
- Recruitment - Who are our competitors outside of the hospital
Table 8
- USDA changing to food data central - food industries have more direct input control
- GS1 - determine a number/code for every product in the world (attempt to standardize information in the food industry)
- Outcome based data - compilation of all datasets

Table 16
- TSI - MDS Analysis (software companies)

- **Management**
  - VSAC Food Allergy data set (value set)
  - Claims and encounters, HIE, as well as EHR data for HEDIS, Clinical Quality Measures (CQMs), and utilization/population health management

Table 3
- Human Resources datasets to employee information-can affect insurance and jobs
- Employer data related to insurance
  - data also collected about patients and insurance companies (Medicare data)
- Inventory (food systems) and tracking data for inventory, ordering and trends.

Table 4
- EHR data for HEDIS, Clinical Quality Measures
- Budget and staffing
- productivity

Table 6
- USDA databases(nutrients)

Table 7
- Sysco, USFoods
- Employee satisfaction, employee safety, employee health/wellness

Table 8
- NutritionistPro
- Computrition
- LeanPath - agricultural management
- PeopleSoft, Concur, and other employee or project management
- Insurance data

Table 13
- Claims and encounters - supplemental health data from health records. These apps bring a lot of data to the clinic, but in care teams should understand using this data. It may eliminate work from clinicians. For example, food insecurity.
- Cathy - try different ones to see which one gives the best feedback.

Table 15
- Forecasting
- Apps that view resumes, and other forms to look for keywords during interviews, hiring, etc.
- Workplace productivity systems - Visionware
- Project management databases - shows each person what their job is, the progress, how much time they are spending, when working on a group project. An app is connected to it and can track the progress of the database.

Table 16
- Insurance Companies
Reimbursement

- Other (areas not covered above) (Example)
  - Government wellness: Dept. of health and human services offers occupational health services in clinical health services, behavioral health services, environmental health services, wellness and health promotion services- each agency can elect which service areas they want to have, they are choosing to have wellness promotion programs as preventative more often compared to clinical, tracking who attends each one and which services areas they are willing to pay for.

Table 3
- Judiciary case searches used by dietitians in law enforcement setting (jail) and fingerprinting databases, license, personal information, health records. This information can be used to determine correlations in the data sets.
- Genetics and health data (23 & Me) - a lot of controversy- taking samples and making consumers aware of possible future health issues/ family relations. - Risk factors also related to insurance coverage.
  - Nutrigenomics data
- Food sensitivity testing and data sets for consumers
- Data set for giving capacity of people in regards to asking for donations- knowing what people to ask for donations- knowing who has a lot of money in a dataset.

Table 5
- Quality of data
  - Sales vs. tracking/promotion of health
- Academy members would like to be provided access to data collection

Table 6
- Agriculture/sustainability- soil quality, weight change in cattle monitored, water quality/management
- Smaller data- NGO list (Environ working group),
  - chemicals to avoid in skincare products, dirty dozen list, CSPI, doesn’t exist to the extent of USDA databases- question of evidence based, miscommunication
  - smaller groups showing up in public action
- App/DTR/health coach field
  - weight/scale data, goals/tracking,
  - blood glucose values- continuous monitoring
  - food tracking-frequency, foods, healthiness
  - exercise-frequency, steps
  - group comments/engagements
  - changes in tracking frequency- monitored by health coach for changes- human touch important
  - PHQ-4 surveys
  - BMI
  - demographics
  - medications
  - profile log-ins
  - Lesson completion
  - challenge tracking/completion

Table 7
- Sustainability: BIG DATA to track someone’s sustainable habits

Table 8
- 23 and me
- Ancestry.com

Table 9
- Retail Point of Sale: uses data to determine what's selling, which drives what is sold (often is unhealthy items), helps you determine values, is it profit or health. If all of the options were healthy, and people are hungry, they will eat it! Make sure there’s always a positive choice as well.
More and more baseball stadiums are offering some healthy items in addition to traditional foods.

Table 10
- Fitbit - able to track what the person looks up. If they want healthy snacks etc.
- We need to track what the consumer wants and looks for and make sure they know what they find and learn is science based and correct information based on the science
  - This will drive research based on what the consumers want

Table 11
- Menu Trends Report: surveys used to see how organizations are using certain products, and observing food purchasers/consumers as well.
- Be wary of populations that may not have access to technology: lower socioeconomic status, individuals with disabilities

Table 12
- SNAP has different data platform and systems vs. WIC has another different data platform → Can they talk to each other? How would they?
  - Tons of data out there already that is not currently being integrated or used appropriately
  - Cincinnati pediatric practice → unmatching data systems where the interfaces do not “talk” to each other.
- Noted intentional use of various platforms rather than others in a competitive sense
  - EPIC vs another platform → why use one versus another?
  - How do we get trained and efficient with AI and establish our place in this location?
- Harm Prevention
- Reimbursement → government influence on our role
- Mandate AI as CEU, or as part of continual training at places like FNCE
  - Added current experience w/ curriculum @ Mwood w/ Management, Finance, etc.

Table 13
- Other data sets:
  - USDA national nutrient database: food processor all use this.
  - MyFitness Pal
  - Baritastic
  - Cronometers Pal (?)
  - Atkins App

Table 14
- Government: health claims data, state accessible data
  - IRB review, HIPPA compliance - institutional review board, any time evaluating
  - Anything that requires data, IRB must be used to ensure the protection of the individual. Safe guards, not only personnel, but security of transfer, usage, etc.
- Vital statistics
- Usage of state health data or local health data
- School district information: School nutrition and dietetics,
- NIH, National Institutes of Health

Table 16
- Apps that collect data
- Corporate Wellness - online workshops, pages read, intake, weights
- Work Badges - tracking where you are going, who’s chart you are looking at
Research (Examples)
- analysis of large data sets (e.g., NHANES)
- Grants awarded data- by region and type

Table 2
- Research data sets could be shared and could then help the community but a lot of times they are not being shared.
- Genetic health initiative (health insurance)
  - asking for gene testing
  - want us to give them gene testing to see if you are at higher risks for disease since
  - possibly early treatments
  - screening genes in a blind way to see if they can identify a disease later on in life
  - study is still in process
  - suppose to be blind, but is it really?
- analysis of large data sets (e.g., NHANES)
- Grants awarded data- by region and type

Table 4
- analysis of large data sets (e.g., NHANES)

OSHA data set - rockerts- body wt. BP. CHD, etc.
- TB outbreak (positive reaction) - OSHA
- Old records to digital medical record -> interventions
- Follow the astronauts the rest of their lives
  - High risk- accidents
- What the risks are due to radiation
- Measuring depression/stress that are already out there (valid instrument)

Generate data sets-
- 40,000
- Reference data- children’s growth
- NHANES
- PENN
- Readmission rates
- Nutrition interventions

Table 6
- GSDI data- barcode data
- IBM Watson data- population health, disease states
- CDC statistics, private database
- Nielsen- market demographics for product appeal like “grass-fed beef” combined with purchasing data

Table 7
- Interoperability with NIH: USDA
- Information from nutrigenomics for personalized nutrition advice

Table 8
- Grants.gov
- EMR
- Clinical trials
- Product trials
- Utilization of other big data sets - such as Improve Care Now (ICN)
- Gatorade and Powerade

Table 10
- International food and information counsel data sets
- Dietary guidelines report
Table 11
- analysis of large data sets (e.g., NHANES)
- Grants awarded data - by region and type
- PEW Research Center
- Used to analyze provider burnout
- Medical Records analysis
- Point of Selection Data: food purchasing, food quality score
- Food choices in retail
- Mobile Apps to analyze consumption of foods in clients or nutrition information of products

Table 13
- There are studies on patients being more honest when answering electronic screeners rather than with an actual person (stranger).
- Genomic testing for breast cancer - companies can keep using your DNA. Companies use it and own it, information on genes because they identify gene sequence. Companies keep rerunning tests to identify variances in genes - only one company owns it and has rights to it (without being able to share with other companies).

Table 14
- Internal health claims data to identify health risks and compliance
- Healthie could also opt in to share data
- HIMARK
- Use of BRFSS, BMI Generator, FatSecret, other app

Table 15
- Pubmed

Table 16
- Analysis of large data sets (e.g., NHANES)
- Grants awarded data - by region and type
- State Driver’s License Data - Height, Weight, BMI and where they can target the population

Dialogue #2: Improve Outcomes

● Business and Industry

Table 1
- private practice: be authorized to access patient information, record outcomes of patients regardless of outside model or outside practitioner or rural telemedicine
- Hospitals: monitor purchase in hospital food service % of processed foods to foster nutrient dense food service purchase
- partner with business grocery purchases of patients you see to apply nutrition education recipes or convenience foods for more successful outcomes

Table 2
- Lab data for laboratory specimens and EHR data of diagnosis, meds etc. to predict outcomes, target prevention etc.
  - All of us research program (mentioned above)
- Integrate employee wellness programs of fitness level for nutrition data
- Can track data trends in food sales based on weather, Holidays etc. and recommends how much you should order and shows what will sell and what will not
Table 3
- Using consumer trend data to personalize the products manufacturers make to increase nutrient profiles of food.
- Use of subject matter experts to use as researchers and to use for speakers.

Table 4
- Authors: Use targeted marketing advertising to improve book sales
- Ways to reduce food waste pre and post production
- Find grants that will be most helpful to our schools
- Connecting our school with food recovery partner

Table 6
- Parenteral nutrition production - between prescription/administration - missing patient data, energy needs, anthropometrics - for company to recommend specific formulas/pumps - thought leadership focus area, making informed decisions
- Decreased cost of care - saving money as dietitians by being proactive, decrease hospitalizations
- Meet customer demands quickly based on purchases and cost - sustainability paper/foam/plastic; tracking purchase of sustainable products
- Labor resources by increasing convenience - machines like Sally the Salad robot, Farmer’s fridge in doctor’s lounges and hospitals
- Providing intelligent solutions to increase participation - use data sets for cuisine indexing in hospitals to improve feedback about quality and satisfaction. Can drive revenue, volume, and participation.

Table 8
- Screening data to prioritize wellness intervention for individuals and groups
- Track interventions to determine efficacy in achieving goals and cost effectiveness
- Track strengths and limitations of products to revise and modify formulations in order to increase purchases (e.g. insulin pumps)

Table 10
- Tracking customer trends on products to track outcomes from their use
- Tracking customers with volume based feeding or early enteral nutrition programs increase nutrient deliveries in ICU patients
- Tracking customers with automatic nutrition intervention with MST trigger helps to lower loss and readmissions
- Tracking consumer trends to educate the consumers so they can make informed choices related to nutrition information products and services.

Table 11
- Retail: point of sales data/educational planning of nutrition strategies for the retailer
- Utilizing consumer data about preferences
- Developing food products and menu items based on the health, nutritional needs, food preferences, needs, and desires of consumers
- Food safety relating to rapid detection of pathogens
- Partnering with Alexa, Amazon to generate meal plans individualized for patient needs and food delivery

Table 12
- Financial planning related to preventative nutrition
- Track trends of how Fast Food LTO’s affect student purchases
- Epic shared data across companies for increase inpatient care
  - example: hospitals to minute clinic to telehealth
  - Know what type of patient and areas to service
  - Outcomes at hospitals: Patient satisfaction, cath infections, etc.
- Aetna/CVS - share data about insurance & Health to decrease cost and prevention
  - Get information about patients to determine needs with diagnosis to decrease length of stay and treat timely.
Table 13
- Salary survey - with predicting power showing behavior and traits that lead to higher salaries and better benefits (including for the Academy).
- Menu analysis that can show if RD is part of menu R & D team (not just doing analysis!) that is a greater variety of healthful options.
- RD’s used to provide science based content for ALEXA to address food and nutrition questions.
  - Dietitian is being left out - including more, not health coaches.
- Analyze preferences - what people want in areas to increase locally grown/sourced agriculture in remote areas reliant on one method. In Alaska, cultural preferences. A lot of different foods issues. The goal of all of that is to increase variety of foods and access, prevent overweight and obesity, CVD. Optimizing health outcomes. A lot of malnutrition, dental caries. Food deserts issues in rural areas of the state. Milk gallon is $20. Accessibility and mapping. Foods and vegetables are a luxury. Even soil is expensive. Is there a way to alert if there is unused food? There are apps - needs to be brought to scale. Doesn’t exist on state to state commerce. Alaska has the challenge of local productions. This communities are only accessible by plane. Outcome: food distribution and logistics, self-sustainability. Reducing reliance on just one type of food transportation. Data that is needed through AI - what is it that they wish they had access to and mapping a system that will allow this.
- Amy: what’s the opportunity for Alaska to produce more foods locally?
- Cathy: Where are the people in need?

Table 15
- Increased dietetic jobs based on needs data. Patient needs, staffing needs, consumer needs, employee needs.
- Assess productivity metrics to assess the need of an RD
- Use nutrition intervention and health impact on cost savings.
- Demonstrate the value of the RD. Have to figure out and use data to demonstrate the importance of the RD. Use data to leverage the value of the profession and of the dietitian to the patients and institutions. Also to show the public that we are the nutrition experts (public perception). Collaborating with IT.

Table 16
- ANDDHII showing how many sessions it takes to achieve MNT results for insurance companies (marketing tool, cash flow)
- Smart Devices recording weight/G.C./HR etc. to see how many sessions needed (marketing tool, cash flow)
- Weight loss improvement based on menu choice
- Purchasing data to decrease cost

Clinical Nutrition

Table 1
- national EMR with standardized items to track on all client at all health care provider offices
- How are clinical dietitians spending their time? analyze productive to justify more staff
- Do numbers of patients diagnosed with malnutrition justify more staff? Are reimbursement numbers increasing?
- National EMR - easy access to data to improve care and lower costs
- coupons based on purchases also reflect health/nutrition needs (i.e. low sodium)
- Look at malnutrition dx by RDNs - how did MDs utilize this data? How did patient outcomes improve?
- Malnutrition diagnosis and grocery store data to increase indiv. who improve malnutrition status outside hospital
- reimbursement comparing MNT codes in insurance claims and patient outcomes on hospital admissions or # MD visits and complications
- malnutrition: ID-trends i.e.) prevalence - Nutrition intervention used for effectiveness
- Client app connected to all other apps to track what client is doing what food they’ve been buying etc.
- databases on patient outcomes of nutrition intervention to show RDN effectiveness like NDNQ1
- increase use of NCPT proof of outcomes from existing data bank

Table 2
- use of nutrition care process language in EHR matched with lab data, vitals and health outcomes
Table 3
- FitS data - feeding infants and toddlers study looks at dietary intake of 4 years and younger in the US to determine areas of where to improve children’s diets.
- Medical records and diets provided to track improvements.
- We have to significantly increase our ability to get paid as RDNs.
- Patient has diabetes - AI analyzes food at meals and nutrition compared to BG levels allows better counseling if data is provided for you.
- Personalized medicine - treatment plans, diet plans - what works for me and what do I need to reach goals.
- Combine retain POS data with dietetics.
  - Private practice - Know top selling products and what often combined with to create more practical recommendations.

Table 4
- Weight management, private practice, outcomes to registries
- Direction and trends of blood glucose levels in meds and CHO intake to suggest changes
- Private practice use pt fitness trackers to refine POC/Interventions for individuals
- Robot - tracks glucose more accurate
- Use weight tracker data to intervene on unintended weight loss (LTC)
- Data on nutrition care patient readmission or mortality rates for financial savings + value of RD
- Use MDS data to track changes in number of pts or % w/ unintended wt. loss, pressure injuries in a LTC facility
- Outcomes that can be improved by data: intervention, LOS, readmission, lab values, QOL
- Collecting data to refute - Nutrition fact checker
- Seamless communication with PLP and ENDO that can track trends w/ diet intervention

Table 5
- Paired databases
  - e.g.: kidney donations
- Connecting health and other databases
- Evidence-based and more accurate information
- Better databases to access patients' medical records across all areas of healthcare
  - link this to food tracker applications

Table 6
- Information from smart pumps and other EMR data - connection between nutrition support delivered and outcomes such as infection rate, length of stay in ICU, decreasing rehospitalization
- Aggregated data from EMR and from indirect calorimetry devices will provide much more targeted data on actual energy needs of patients of all sizes, body, and ages
- Data on malnutrition diagnosis can be correlated with nutrition delivery and outcomes such as quality of life, length of stay, pressure ulcer incidence, time on vent, physical function parameters

Table 7
- Improved population health
- Decrease readmissions → decreased mortality
- Improved care → quicker & better outcomes
- More personalized care
- Increase certain preventative education in specific geographical areas
- Continuity of nutrition care post hospitalization → interoperability
- AI follow trends to prevent negative health outcomes
- Improvements in healthcare spending
- Smarter documentation in EHR → improved templates
- More reliable data obtained for intervention outcomes
- Specific treatment based on evidence

Table 8
- Malnutrition identification, diagnosis, and treatment to reduce hospital readmission rate and healthcare costs
Show effectiveness of RD intervention in clinical outcomes (improved weight management and malnutrition) to increase reimbursement
- Data regarding birth rates/statistics to target infant nutrition programs
- Apps to track communicate with RD and track the success of target outcome (weight loss, weight gain, diabetes management)
- Data collection from PCPs and schools (BMI) to determine underlying factors of specific conditions - e.g. monitor obesity trends in children
- Track strengths and limitations of products to revise and modify formulations in order to improve health outcomes (e.g. EN, TPN, insulin type and administration method)

Table 9
- Practice A1c levels improved by RDN intervention and all other inventions (meds) stay the same
- Can help increase caseload by location
- Helps validate profession when visits to RD show correlation with increased health outcomes
- Practice BMI >40 levels reduced with RDN interventions
- Meal partners/supports for eating disorder patients w/o family or friends in the area
- Social media patterns and relationship between eating disorder diagnosis
- Improve clinical outcomes based on optimizing dosing treatments, etc.
- Improve health outcomes by reaching target audience more specifically - based on their beliefs, purchases, demographics, etc.
- Utilize preferred and cultural foods to develop healthier eating habits and patterns
- AI to determine changes in stature r/t increased weakness changes and in ADLs (ability to cook etc. in homes)
- Prescription for health programs be able to track purchases instead of just perception of behavior change by participants
- Weight tracing from lifelong data-not just snapshot
- EMR data collection combining mental health sx, ED sx, wt, and intake, to highlight trends
- AI for risk assessment to help determine what to tackle first
- AI in beds of home care clients alerting us to wt gain r/t CHF
- Develops models to improve health/self-management of care based on outcomes of programs that have been successful
- Relationship between weight at discharge, amt of higher level care allotted by insurance, and rate/time of relapse
- AI to determine actual medications dose (insulin) to determine correct dosage is taken
- Use risk factors for program development and therapy
- Meal tracking/grocery tracking to provide opp for intervention and ed

Table 10
- Graph progress: weight change, blood sugar, cholesterol, etc.
- Use information for more individualized nutrition counseling
- Focus on areas identified as a problem for the big group
- Tracking MST data to initiate RD assessments for potential malnutrition dx
- Faster communication and collaboration to get results more quickly

Table 11
- Food and fitness trackers used for individual goal setting and tracking
- Outcomes to improve tracking malnutrition prevalence

Table 12
- analyze breastfeeding rates @ NICU discharge to assess the effectiveness of interventions
- analyze hospital room service data to evaluate acceptance of new healthier menu options
- analyze malnutrition diagnosis, intervention and readmission data
- Examining research and data on HAES and Intuitive eating approaches versus traditional approaches to analyze long term outcomes and maintenance of weight loss

Table 13
- Improving access to Genomic/genetic data to improve patient outcomes.
  - Addressing the limitations if this data is proprietary.
How will RD’s be able to access and use this data to improve patient outcome.

- Finding new ways of identifying or predicting medical conditions at birth - change diet
- Analyze self-reported data/health markers to optimize nutrition status
  - Rapid data sharing: BMI and quality of life
  - Screening data - make set of interventional actions for clinical practice to address social determinants of health, connect with community, track referrals are actually accessed (like behavioral health, ACE scores)
  - Gathering food intake, fitness, sleep, eating behavior to improve health outcomes.
- QI - rapid dating among centers - sharing allows for quick improvements in standard of care (BMI, QoL)
- Promote referrals to leverage dietitian visits.
- Finding new ways to identify or even predict a tendency toward a particular deficiency (ex. gene related to converting beta carotene to retinol)
- Community partnerships from ER data that they were identifying.

Table 14
- # of ER visits per year to predict food insecurity/malnutrition
- Prescription linked to need for dietitian communications between systems - to better assist treatment of the individual
- Integration systems between medical record, pharmacy record, ANY healthcare provider

Table 15
- Using data from Medicare physicals and health data to increase referrals to RDN’s for medical nutrition therapy and to complete the nutrition-focused physical exam.
  - Using it as a predictive tool to forecast

Table 16
- Trend on where my patients are eating out at and what food products they are buying
  - Cardiac Rehab - different locations and comparing patterns
- Giving patients multivitamins can improve wound healing
  - Wound care and multivitamins,
- Vitamin D supplement and Bone fractures - EMR’s, Quality Improvement
  - Impact of IDDSI on tube feeding, weaning/hospitalization - is that really improving patient quality
  - Teaching telehealth to students can increase telehealth in practice
  - Using telehealth as part of an interprofessional team can improve patient care
  - Using my MyFitnessPal or other food tracker - areas of diet to focus on based on cardiac rehab site
  - Providing nutrition education can decrease HgbA1c

Communications

Table 1
- App to tell people what to order at a restaurant

Table 4
- Use to inspire people to make healthy changes such as monitoring intake, cooking, fast food selection

Table 6
- Monitoring market trends in social media - harnessing social media to deliver nutrition messages - getting involved in that arena or they will continue to come from elsewhere

Table 11
- Targeting impactful nutrition messages in the retail setting based the REAL time of consumer needs (ex: googling)
  - Google analytics search data connecting to “Find an Expert” tool of the Academy (Google Analytics)

Table 12
- Use AI to better reach target audiences for more effective communication
- Update find-a-preceptor resource & encourage use by practitioners and students alike.
- Consistent platforms between health systems to create more consistent sharing of information and more through communications within the field.

Table 14 –
- Each DPG provides information about what data is relevant to them
  - allow DPG to determine what sources are relevant and have the academy similar to EAL be able to support utilization of the data sets
  - Expand work of EAL with datasets access
- Use correlations to give parameters to research

Table 15
- Understanding consumer interests
- To get simple practical evidenced-based nutrition to consumers
  - Wants vs. Needs for the consumer and how to communicate the nutrition expertise to them.
- Leverage our profession as experts in nutrition

● Community and Public Health Nutrition

Table 1
- Monitor CDC data on breastfeeding rates to project needs for promotion by RDNs support
- Data from link cards/wic/etc to assess and improve nutrient quality of diets
- Government wellness: use attendance records to guide which classes/webinars clients want more of
- Data from EMR connecting with retail data: improve malnutrition outcome after DC, improve systems/environment to malnutrition
- GIS or geospatial analysis with access to dietitian, access to nutrient dense foods

Table 3
- Obesity intervention in low income Hispanic population-use data to define successful practice.
- Grocery purchase history of clients can help provide more focused guidance to my clients
  - better products
  - less expensive options
  - variety
- Use data on what food choices people are making to see how nutrition related messages impact them.

Table 4
- Retail RDs- Point of sale - purchasing habits, link to health outcomes to specify to locations/communities to address health disparities
- Get data summaries to RD faster and easier to understand; may be 1 page and then can go to database for more understanding
- Uses data for national media reports. May reduce confusion about diet, health, and other environmental factors
- ID ways to reduce allergan issue with products substitutions

Table 5
- Using student ID data to promote and reward healthy behaviors among college students
- Increase frequency of consumers talking to an RDS for nutrition advice
- Develop AI tools to increase sales of healthy foods like veggies
- Use AI tools to track health outcomes with RDN visits
  - i.e. health improvements due to RDN visits such as reduced weight and/or blood sugar levels

Table 6
- School Food Service-Improved and more sophisticated software solutions
  - Tracking purchases, behavioral expectations vs actual statistics
  - Food safety outcomes- could be improved with actual data- ex: motion sensor with name tags to monitor hand washing or other food safety practices
Table 8
- Increase access to food and knowledge of food availability through GIS mapping
- EMR data and government datasets for chronic disease reduction
- USDA database for child friendly recipes and food items in NSLP and NSBP to increase participation, nutritional value, and prevent adverse health
- Show the value of WIC by utilizing WIC participant info to increase participation and duration of participation
- Data regarding birth rates/statistics to target infant nutrition programs (WIC)
- Shopping behaviors of SNAPEd and WIC participants to provide education and improve nutritional value of foods purchased.
- Demonstrate healthcare cost and overall life cost savings related to improved management of diabetes and decreases in pre-diabetes developing into diagnosed diabetes

Table 9
- AI related to food insecurity- purchases and EBT card
- Link selections from SNAP/WIC, f/r lunch choices with health visits/dx and hospital visits to often education/intervention
- Improve continuity of care from healthcare to community programs

Table 11
- Community agriculture: track local production of foods and correlate with the needs of communities to provide to communities as needed
- Food Waste: track what consumers are buying with reminders of when it is being used and providing recipes to use up the food
- Analyzing rural food access for various population segments using transportation data, retail data, etc.
- Analyzing call center data to area agencies on aging, utilizing food banks or hunger hotlines to use in community health needs assessments
- Creating local, regional, national food systems that support dietary guidelines
- Community mapping based on food deserts
- Bringing nutrition into the home in at risk populations or those with limited accessibility
- Social determinants of health: mapping quickly to identify gaps
- Matching community nutrition resources (in real time) to the needs of patients identified as insecure

Table 12
- Communicate with other RDs using same/ similar data sets
  - example: school district-pediatric RD - Food bank -WIC
- AND -Public policy advocacy for federal and state data platform interfaces data integration
  - example: SNAP/WIC/NSLP etc
- Tracking food bank clients/SNAP/WIC and other low-income individuals & users to connect them with appropriate resources → RDs.

Table 13
- Use of LILA and GIS data to identify food insecurity and to help improve access to food
- Change the food environment
- Search engine ALEXA. Driven when personal searches indicate a need (ED, chronic disease).
- Intervene when searches start developing eating disorders: Identifying when there’s a body issue. Find correlation with searches and intervening. Connection with ALEXA. May already be happening if company or RDN paying for search ads).
- Geographing mapping information of food deserts to drive interventions to address food insecurity. Accessing purchase data. Big picture on the food environment (blue zones - making the healthy choices the easy choices)
- Targeting nutrition information based on demographic info: disease incidence and prevalence (could be managing, to manage quality and access to care regionally).
- Clinical and public health: Clinic identify that diabetes patients with more ER visits at the end of the months - hypoglycemic events, patient runs out of benefits, low food security/access.
  - Partner with farmers markets to glean food and make it available at clinic “food pantry”. Patients can take food on way out after MD visit. ED events decreased (improve cost and QoL).
- Use food/beverage purchasing data to help drive healthier food choices and change food environment for improved public health.
Identify trends among youth related to food exercise, social, emotional, drug use - identify youth influencers for positive social norming campaigns.

Table 14
- POS data to track and improve consumer health from education
- Prevention using data to trigger referral to DPP

Table 15
- Use hospital discharge data to reduce hospital readmissions
- Assess client learning preferences (tendencies) to provide effective intervention/education
- Identifying RDs in the area for consulting: creates value based on other resources
- Match interest searches for nutritional info to appropriate provider or resource
- Tracking grocery purchases with changes in health outcomes of client metrics
- Use interests or trends to guide nutrition education (talk about controversial subjects)
- Use nutrient analysis data to identify nutrients older adults need education on
- Use census data to identify geographic areas with specific populations to target outreach (ex: older adults, ethnic communities, etc.)

Consultant

Table 6
- More data available to make decisions quickly, customize care and improve quality care

Table 8
- Biometric data and physical examination used to determine and prioritize an appropriate individualized plan of care and interventions
- Track interventions for cost effectiveness (medication, insurance, etc)

Table 9
- Provide data for making financial decisions regarding staffing type and hours required
- AI to alert to actual staffing needs - time actually spent in patient’s room monitored with sensors

Table 10
- Graph progress more steps more veggies etc. on their progress
- Improved patient client/ client satisfaction right messages, answering questions they have better collaborate, etc.
- EMR sharing data to track outcomes and improve efficiency
- More accurate data collection (tracking with technology versus diet recall, etc.)

Table 16
- My fitness Pal - trend the weight loss with my nutrition consults with the session (how many sessions)

Education

Table 1
- Collect evaluation data on standards in classroom of supervised practice as a part of their work they are already doing: improve education training
- Use economic data and school food service to help improve nutrient density in SNAP, breakfast and lunch in schools
- Expose students to decision making based on data resources
- Develop teaching materials and activities using a variety of resources
- Use existing data in an appropriate manner to resolve and evaluate the care provided
- Expose students to data

Table 2
- Use of SIM labs in training
EMR simulator record can be used in dietetics education to prepare students and interns
- recommendation for future practice, adding data analytic to dietetics curriculum
- Nutrient data banks for menu analysis
- in online teaching
  - improve students class attendance per performance
  - program completion
  - student aid use

Table 3
- Student usage of teaching management systems/software to increase performance in classes.
- Can we use student data to personalize learning experience and meet competencies?
- Preceptor database to have in one place for supervised practice - match intern to site - especially for distance interns who need to find sites.

Table 4
- Preceptor database
- How to students documents with NCP
- Capture and analyze faculty reasons for accepting jobs and successful recruitment efforts
- analyze student and health professions to predict future graduation rates for programs and drive funding

Table 5
- Using assessment data for recruitment retention, DPD program, and exam success
- AI to describe and enhance real-time learning and development in the classroom
- Using program data to promote success among participants
  - i.e.: do XYZ and odds of success increase (national programs)

Table 6
- University demographic data to recruit a more diverse student body to the profession
- E-learning/simulations to improve quality of dietetics education- ensure future dietitians are practicing at the optimal level
- Data sets on internship acceptance/rejection- improve DND digital to be more intelligent and gear appropriate internships
- Using data analytics to convey evidence based practice in an appealing way

Table 7
- Follow student performance on registration examination
- SNAP point of sale data shared with clinician → incentive programs
- Improved student involvement
- Targeted education
- Students to become better researchers in the field and workforce

Table 8
- Reach younger generations by utilizing social media platforms and fitness/diet tracking apps to provide evidence-based nutrition information
- Fitness and diet tracking apps can be used to determine common practices and preferences then RDs and other health professionals can prioritize consumer needs
- Provide interactive nutrition information and education through video counseling, real time online demonstrations, etc.

Table 10
- Be trend setters
- Analyze trending dietary habits purchases of consumer to produce accurate nutrition messages to educate the consumer
Table 11
- Tracking areas of knowledge deficiency among nutrition students to improve their education
- Identify needs in communities so students can be placed to assist in that area, while also providing learning opportunities for students.
- Tracking student learning outcomes and tying that to their success in the profession
- Transitioning student feedback improving student outcomes
- Bridging the gap in online learning to improve the lack of personal connection
- Database to connect interns and with potential preceptors based on the lack of preceptors and accessibility of researching them
- A personalized database to track hours and competencies of dietetic interns

Table 12
- Use of Simulation lab for Dietetic Interns/Nutrition students in internship and college
- Speakers from United or other large insurance companies to tell students how they are using big data and WHY it is important
- Write a grant to get “big data” platform with college of business and develop projects where business students or RD students learn to pull and use data to make decisions!

Table 15
- AI - Virtual reality for simulations (patient simulations, management simulations)
- ACEND program goals and KRDS to leverage for new faculty or class
- Assess personal learning preferences to design nutrition interventions

● Entrepreneurial
Table 11
- Wearable tech data and connecting that to electronic health records that are used by RDN’s so they have immediate access to this information
- Transition of care data transferred from inpatient to outpatient to improve long term outcomes
- Microbiome data: many companies test the gut bacteria but they do not tell the patient what to do based on results. Can they be directly connected to an RD in the area based on results? Microbiome companies can collaborate with the AND database of RDN’s.
- Genomics data integrating the risk management of chronic illnesses with diet modifications to delay onset.

Table 14
- California and other data gatherers has data on CBD/hemp that could be beneficial to RDNs
  - assist in patient outcomes i.e.; trauma, inflammation

Table 16
- How effective is the education for corporate wellness? Are they applying it long term?
- Flipping the classroom can improve pass rate on RD exam
- Better understanding nutrition as a major
- Marketing to students in nutrition
- Learning management systems - exam/quiz scores, what courses do you need for your students that are actually relevant?
- Teaching Telehealth to students to get them to use in practice, interprofessionally and patient care
- Improve student health through trackers
- Using data to track effectiveness of education and classes
- Capturing data on incoming students with intent in nutrition to “advertise” nutrition classes
- Increase enrollment in dietetics using student data
- Use learning outcomes to drive courses taught

● Executive Leadership
Table 1
- Financial outcomes at hospital level- value based purchasing, aka-pay for performance
Table 4
- What is the best next step in our associates career pathway
- Times studies to support staffing

**Informatics**

Table 2
- Adopt AND website to FAQ for recent nutrition google searches
  - direct link

Table 3
- Ability to quickly and easily pull research data example: Wikipedia.

Table 4
- Improve data viz that is quick and easy to consume and easy to share out

Table 8
- Virtual collaboration with EMR and other AI (e.g. apps) to follow patients after hospital discharge to help determine what leads to readmissions and develop appropriate interventions
- ANDHII to show what evidence-based practices/interventions improve outcomes

**Management**

Table 1
- Hiring practices: pool of candidates level experience/skills

Table 3
- Data collected in food service operations can improve outcomes regarding patient meals (quality and preferences) and determine budget changes.
- Food purchases annual history
- Dollars spent on categories of food
- To save hospitals/LTC facilities money - use big data to determine what food choices residents are making and how various factors impact it (forecasting and demographics and diagnosis), could also be used to help RDNs see areas for education.

Table 4
- What is the best next step in our associates career pathway
- Times studies to support staffing

Table 7
- Increase efficiency: decreased labor costs, food costs, food waste
- Registry for all dx: to prove efficacy for patient outcomes - inpatient, outpatient, private practice: Similar to ANDY
  - EHR would download into a registry
- ROI → to increase reimbursement for more disease states
- Improved employee satisfaction
- Using POS data for improved menu diet quality → increased cafeteria sales
- Reduce staff turnover
- Improved associate engagement/satisfaction
- Reduced time manually entering large amounts of data
- More kids/patients eating healthful meals

Table 13
- Increased healthcare reimbursement
- Promote nutritional balanced meals by assessing food choices.
Healthcare industry use of data to risk stratify, direct resources, measure, evaluate intervention on patient outcomes. Impact on cost savings.

- Large health sharing system of data sharing networks for improving client satisfaction
- Quality improvement from clinical level up to healthcare delivery system state/federal. Impact on cost savings. What trends in care access (like RD services, behavioral health services) improve health outcomes.
- Managing utilization via claims/encounters and supplemental data to assess risk/use of predictive algorithms. Goal = more membership assignment ($) based on quality/cost/value evidence per data.
- Large health information sharing system. Data sharing networks for quality improvement

Table 15

- Plate waste to reduce food costs
- In-person vs. telecom/virtual counseling effectiveness
- Track changes in student food selection and participation in school meals linked to procurement of local foods
- Benchmarking data against other medical centers, local competitors, etc.

● Other

Table 6

- Individualized care improves outcome- using data to make personalized and informed interventions at scale (reaching larger volumes of people but maintaining quality)
  - Alerts about client anthropometric/behavior or decrease in frequency of login/tracking: These changes are brought to coaches (on Omada Health- App) - These alerts prompt feedback, celebration for goal-reaching, and improves outcomes. Technology advancement drives intervention, outcomes, engagement- individualizing data for high amounts of clientele- (scalability)

Table 11

- Food production relating to precision agriculture: increased crops yields and efficient use of resources

Table 12

- Why can’t we track CPEU’s in a more seamless fashion?
- Begin work in DC (federally) to encourage and mandate regulations for licensure for nutrition Update EAL and make it a consistent, continuing update.

● Research

Table 2

- PRIMER patients receiving integrative medicine effectiveness registry primary outcomes
  - promise CAT
  - secondary outcomes
    - perceived stress scale
    - patient activation measure
- Dietetics
  - EAL data set to improve outcomes.
    - however --can a guideline or area be updated based on detection of research published in a particular area

Table 4

- Work with RDNs to collect outcomes and pool together to demonstrate impact for health finance

Table 5

- Compare success rates between transplant dietitians vs bariatric surgeon for weight loss to get patients on kidney transplant list.

Table 10

- Connect population health data with consumer trends
- Respond more rapidly to consumer questions
Table 11
- Tab Narrow the gap between research and practice

Table 14
- Healthy People 2020 - using data to determine nutrition agenda
  - partnering with genomic services i.e.; 23&me, ancestry.com
- State data using trauma screening and nutrition relationship

Table 16
- Integrity of the data being put into the database - good quality diet analysis
- Detailed accurate diet analysis for protocols/process of high quality research
- Collective exercise/activity and diet data from fitness platforms
- Physical activity - logging physical activity outside of asking them, can we leverage the data being collected in fit bits etc.
  - Measure of physical activity to determine total calorie needs (free living/moving people)

REPORT-OUT Dialogue #2: Share two opportunities to improve outcomes and their corresponding practice area.

Table 1
1. Opportunities to improve outcomes: Analysis of nutrient density food purchasing and offering as providers (schools, hospitals, etc) to promote health/healthy behaviors
   Practice area: Food Service/ Schools
2. Opportunities to improve outcomes: education & behavior management- EHR-national communication sharing-continuum of care level, ultimately client outcomes
   Practice area: Public Health

Table 2
1. Opportunities to improve outcomes:
   Practice area: education
   - Use of simulations on EMR record and food service measures that build on each year and build on other collaboratives in the previous year
2. Opportunities to improve outcomes:
   Practice area: resources
   - trends in research/predictions for updates to activate on consumer page and page/EAl

Table 3
1. Opportunities to improve outcomes:
   Practice area: Food service Management
   - External factors (trends, weather, news) in the environment that impact personal food choices. Can use this to improve procurement and financial management.
2. Opportunities to improve outcomes:
   Practice area: Education
   - Improve student learning and personalized learning outcomes based on student ability.
   - Preceptor availability data and student location.
3. Opportunities to improve outcomes (extra topic)
   Practice area: Consumer
   - Capturing data using technology like a FitBit to determine online/retail spending and lifestyle to have better dietary guidance.
Table 4
1. Opportunities to improve outcomes: Develop education competencies for entry level data related knowledge and skills for dietetic students and interns. Cont ed opportunities for RDs. Data drives everything.
   Practice area: Education- and higher ed/ Continuing education
   Develop competencies for entry level data related knowledge and skills for dietetics
2. Opportunities to improve outcomes: Clinically collect and integrate patient database across care settings and between care providers to obtain and generate outcome data, communication, and reimbursement (Registry- type system)
   Practice areas: Clinical/ research/ public health

Table 5
1. Opportunities to improve outcomes: Connecting health and other databases
   Practice area: All
2. Opportunities to improve outcomes: Use AI to obtain real-time information on databases
   Practice area: All
3. Use AI tools to track health outcomes with RDN visits
   a. i.e. Health improvements due to RDN visits such as reduced weight and/or blood sugar levels
   Practice area: All

Table 6
1. Opportunities to improve outcomes: Using big data to make personalized and informed interventions at scale: be more agile
   Practice area: relevant across practice areas: food service, management, consultation, etc
2. Opportunities to improve outcomes: Increased food safety, tracking actual activity
   Practice area: Food management

Table 7
1. Opportunities to improve outcomes: PERSONAL BIG DATA: utilizing DNA, gut biome, genomics, pharmacy, lifestyle habits → for personalized nutrition recs
   Practice area: Clinical
2. Opportunities to improve outcomes: improved diet quality at a lower cost → while decreasing labor and food costs
   Practice area: Management

Table 8
1. Opportunities to improve outcomes: Decrease food insecurity by integrating Big Data systems, such as GIS data, pharmacy data (medication use), clinical data (hospital admission rates), and enrollment information in food assistance programs. Examples - offer personalized nutrition education and price incentives for individuals using SNAP/WIC to promote health choices
   Practice area: Community and Public Health Nutrition
2. Opportunities to improve outcomes: Decrease chronic disease risk and hospital readmission rate through the utilization of data to track client/patient behavior after discharge and the ecological momentary assessment to prompt responses and feedback to people in real time. Example - patient with diabetes who leaves the clinical setting with insulin pump is prompted to “remember to eat ___ grams of carbs at noon” if their glucose level is low.
   Practice area: Nutrition Informatics

Table 9
1. Opportunities to improve outcomes: AI to collect data through an individual’s lifespan i.e. medication dosing, labs, anthropometrics from EMR, etc for greater reimbursement and health continuity
   Practice area: Clinical
2. Opportunities to improve outcomes: AI to gather cultural and personal preferences (social media preferences, purchase history, search engine history/trends) to provide more personalized individualized care
   Practice area:
Table 10
1. Opportunities to improve outcomes: Improved EMR sharing of patient data to track outcomes and improve efficiency for the patients.
   Example: if they are traveling somewhere and get sick they can receive coordinated care. So you won't have to tell each doctor the same exact story over and over again which will improve health outcomes and patient satisfaction.
   Practice area: Clinical
2. Opportunities to improve outcomes: Tracking consumer trends to educate the population so they can make informed choices related to nutrition information products and services.
   Practice area: Education, Public Health, Clinical

Table 11
1. Opportunities to improve outcomes:
   a. AI tools to enable consumer change in counseling through food & fitness tracker apps, Alexa, google analytics to
      i. Increase the impact of counseling
      ii. Increase behavior change
      iii. Empower clients and patients to make decisions and follow through
   Practice area: Educational, Counseling,
2. Opportunities to improve outcomes:
   a. Integrating multiple data sets for strategic planning and influencing the retail point of sale, food safety management, wearable devices, and electronic health records to
      i. Plan and implement programs in various settings
      ii. Influence stakeholders and funders
      iii. Collaborate more effectively with other partners and disciplines
   Practice area: Entrepreneurial, Food Service, Retail

Table 12
1. Opportunities to improve outcomes: Create more Registered Dietitians via the use of simulation labs and “live” practice for dietetic interns and nutrition students during internships and/or college...Encourage practice prior to entry-level RD position // Practice area: Educational, Food Service, Retail
2. Opportunities to improve outcomes: Greater sharing of data and information between various platforms to create better & safer care for both patients and consumers // Practice area: Clinical & Communications

Table 13
1. Opportunities to improve outcomes:
   Practice area: Clinical: To improve patient outcomes to improve access to genetic data. Genetics/genomics study to predict medical conditions.
   2. Opportunities to improve outcomes:
      Practice area: Public Health: Have RD reviewed, science based data to aid in searches such as ALEXA to prevent and target certain populations that may be at risk of risky behaviors.

Table 14
1. Opportunities to improve outcomes: Data use of individuals with risk factors, using to target prevention advertising for referral, taking to providers, connection between providers
   Practice area: Communication, research
2. Opportunities to improve outcomes: Healthy people 2020 objectives to define nutrition agenda
   Practice area: Research

Table 15
1. Opportunities to improve outcomes: Demonstrate the value of the RD. Have to figure out and use data to demonstrate the importance of the RD. Combine with IT and use data to leverage the value of the profession and of the dietitian to the patients and institutions. Also to show the public that we are the nutrition experts (public perception).
   Practice area: Business and Industry
2. Opportunities to improve outcomes: Education
Practice area: ACEND program goals and KRDS to leverage for new faculty or class

Table 16

1. Opportunities to improve outcomes: Using data to assess patient results and outcomes to improve patient care, increase reimbursement, & patient satisfaction.
   Practice area: Clinical/Business/Community
2. Opportunities to improve outcomes: Using Administration Data, High school data, Grade school data, Google Searches, Social media searches, Key Words, Increase diversity in the Dietetics Profession
   Practice area: Education

Dialogue #3: Elevate Roles

Table 1

- Become involved in neighborhood community, gather data on issues affecting health and identify ways to improve. Become a leader in a neighborhood association or a city councilman
- As director of Food and nutrition services in a hospital apply for higher positions when available. May lead to VP or CEO position
- RDN to work with food system to end (or at least decrease) world hunger
- Working with policy (be the Senator/Rep/Gov/Pres) to improve our healthcare system
- Big data results of MNT, increase consumers and insurers to see RDN because of reimbursement
- Developing healthier menus to increase participation in meal programs
- Through research develop program to increase mindful eating, wellness and wealth
- Have the malnutrition eCQMs approved/implemented so that malnutrition is a measure reported to CMS- outcome measure so that it gets attention of hospital executives/MDs to show impact RDNs have on hospital outcomes and value based purchasing
- Have automatic RDN referrals generated through EHR based on Patient diagnosis or medical problem list- auto referrals to output RDNs/Public Health, etc.
- Informatics- RDNs working directly with EHR companies and/or informatics dept. to be able to influence the EHR capabilities and info. sharing
- Use grocery store purchasing trends to promote the need for RDNs to partner and/or offer nutrition education
- Designing a platform based on data on chronic disease prevention to create sustainable food systems, utilize new food technology, dealing with climate control, regional farming, and plant-based nutrition
- Be intelligently aggressive
- Be ahead of the curb in the area of work
- Take courses in the use of data bank
- know how to harness big data and statistical analysis, research and make EB solutions, suggestions
- Futuristic outcomes to instill change
- RD to start licensure reciprocity among states to expand coverage area. Use telehealth to reach more clients
- RD to bring impact data to congress and bills or run for office
- Hospital RD to use big data to show impact on patient nutrition status, decrease readmission get paid more, higher reimbursement
- RD to advocate for soil health to increase utilization of restorative ag by showing data of decrease run off, increase water sequester and microbiome
- Microbiome: citizen science- collect info on many people’s microbiome, which diseases/conditions they have to help us figure out what is normal. Then follow those people (cohort study) and re-test to figure out what helps improve vs. hinder gut health and overall health

Table 2

- Data mining of EHRS of improvements in health outcomes can provide evidence of the effectiveness of interventions by the RDN leading to a more respected level within the healthcare area
  - better outcomes you have the better potential for more money
- Practice Area: Clinical, Research, Informatics, Public Policy
  - Data Sets: NHANES Laboratory Data, National Health Interview Survey, NIH All of Us Research Program (NIH Precision Medicine initiative), health apps data
• Outcome: Prevent and manage chronic disease
• Elevated Role: Laboratory informatics RDN
  ○ Practice area: research, community, clinical
    ▪ Data set: NHAMES, choose my plate, USDA food composition database, food composition database
    ▪ Elevated role: RDN enhancing, public health
    ▪ Outcome: weight management
  ○ Practice care: community dietetic, setting – WIC
    ▪ Data Sets: WIC has a number of data sets available. Review data set to track association between breastfeeding, use of lactation consultant, and BMI %’ile at ages 2-5.
    ▪ What if the dietitian were the lactation consultant, IBCLC. What kind of administrative changes necessary to support the RDN getting this certification.
    ▪ Outcome: Increase FTE for RDN, encourage RDN (perhaps compensation) for RDN to get IBCLC
    ▪ Elevated role: WIC Director to Public Health Dept Dir

Table 3
  ○ Clinical Nutrition: Improving nutrition and health outcomes of youth. Using food purchasing, school, fast food, home, real time food decisions (phone). Elevated role: Dietitian analyzing data and RD are go to person for nutrition in schools, etc. Getting RD training so they can step up and utilizing skills never used before. Bigger push for dietitians to know statistics and data analysis. Change how seen as a profession. Genetic data can provide personalized guidance.
  ○ Business: Dietitian can assess risk factors using data sets and do the research/find information. Elevated role: RDs should be at the forefront of money making companies that have no background in nutrition.
  ○ Education: Dietitians should be training SLP, OTs, and therapist about nutrition practices who are educating others about nutrition. Within our scope of practice and tasks are given to other job titles. Elevated role: Dietitian completes tasks in scope of practice and educates other healthcare titles about the proper way to educate on nutrition.
  ○ Public Policy: People do not recognize obesity as a disease and not treated. Elevate the RD as a provider and have obesity covered with insurance.
  ○ Management: Purchasing records - having dietitians be more in charge of the budget
  ○ Management: Workers comp claims - have dietitian in charge and outcome have less claims.
  ○ Community: Annual state of nutrition report-dietitians should be the ones to collect all the data from national health surveys- we would influence government spending on nutrition and healthcare based on the research we have. They would look to us as the US health experts for a variety of different areas and topics.
  ○ Clinical: Physician education for cooking- academy could step up and have input in medical school nutrition education (design program) to educate physicians about proper nutrition practices.

Table 4
Use population data to better
  ● Bigger picture;
  ● Data available on Mediterranean diet and USDA to elevate the menus to be more heart healthy
    ○ Datalytics - analyzes all the menus and see what trends are happening and most used ingredients
  ● Grocery store-
    ○ Track information and having a Dietitian help them determine what to bring into the store, outcome data, etc;
    ○ Track real time EMR data change, glucose, A1C, Wt. medications decreases
  ● Obtain collect data - clear data connecting interventions to outcome to demonstrate value --> drive reimbursement and create opportunity
  ● Use population data to better understand individuals with CKD progress to ESRD factors influencing and who dies before reaching ESRD; data would enable targeted intervention --> care management
  ● Issue with tube feeding/ICU to long and took data to figure out the cost effectiveness of different feedings
  ● Use data to change institutional prioritize clinics on education programs
  ● Education- students are exposed to so many different teaching styles; using data on post survey to see what works and what doesn’t to help teachers teach better to help the future students succeed
- Breastfeeding and solid food - collect the data and provide recommendation - reducing stress for parents (Parents are recording everything)
- We need to be the influencer
- Cost effective methods for patient care
- Invalid testing - not evidence based; not improve or do anything to help facilitate change
- Science is not keeping up with outcomes

Table 5
- RDN shaping global health
  - using my (Lacey McCormack) skills to teach our next generation dietetics students skills that aren’t really in the curriculum
  - integrate into future education model research/ data analysis
- Informatics RDNs moving into clinical analyst positions
- Change dietetics internship from a hospital based experience to a more broad or specialized experience
- RDN as a director of health and wellness in a grocery store or as a standalone clinic with a staff; in house services could include tours, classes, cardiac rehab, meditation/yoga, one on one consultations, billing/admin staff, massage, personal training or physical therapy, credible advice for alternative medicines and vitamin supplements, nutraceuticals
- RDN Leader - A position in which can have a center or multidisciplinary team to approach and have capacity for more patients
- Use AI to help the RDN follow/monitor their clients at home in-between sessions (ex. exercise, weight, movement around the home, glucose readings, food choices from fridge
- Design a “wellness” questionnaire for the whole city to give the mayor specific statistics on our city
- “One of our dietitians left in attempt to do ‘Big Data’ with Walmart in Bentonville (food purchasing analytics). It definitely would be much higher pay!”
- Screening and assessment (especially) in places that don’t have good access to RDNs, such as rural communities.
  - enhance rural practice
- Increase communications regarding the current research on hot topics
  - research on data trends
    - consumer search on Big Data
    - tailor message to “hot topics”
- RDN - providing information at the right time to the right audience
- Access to care (especially in rural areas)
  - private practice is spotty in certain rural areas
  - Is state licensure a help or hindrance?
- reducing food waste at home
  - smart kitchen
  - shopping reminder / ordering
  - food safety (fridge, leftovers, storage, heating, freezer monitor of what and when item was frozen).
- RDN education on tech for food safety

Table 6
- States without licensure- building the brand- AI could help with precise calculated interventions in community for maximum impact. Recognizing how/where to invest limited funds through marketing and promotion. Pursue more resources/grants more innovative and targeting programming
- Leverage AI for scalability, have enough capacity to reach people, make informed, validate best practices: reaching more people with less resources through management and team collaboration
- Can we use AI in home care situations to monitor changes in weight/stature, taking medications correctly, eating correctly, signs of disease in early stages in independent or assisted living- allow us to intervene earlier: improving our role in long term care monitoring
- National shift from fee for service to value-based payment- Show through data how inclusion of RD as part of care team can improve outcomes for chronic disease. A link to higher performance of the RD’s health system to optimize contract; data sets= claims, encounter HIE, EHR
- Including an RD on the care team- will be outside of doctors’ office. we should get more data about improvement in health to gain our share of payment/recognition of value
moving toward value- dietitians shifting mindset.

- Home visits-social determinants of health- nutrition professionals looking at whole person; need data to show how cost-saving our profession is.
- From an education standpoint we can explore additional training- we have content expertise, but it needs to be incorporated into experience with technology (like the RD bot) to elevate role. Capturing this technology to improve our profession and role. Need RDs to be driving force in change- assessing public interest: more willing to go online than set up an appointment
  - Success of telehealth interventions offer opportunity to improve health outcomes
- Need nutrition quality measures - long term or short term goals and technology to improve future practice
- Prove that in some areas, dietitians will have the highest impact vs health educators/coaches- need data to support
- Get creative to use the data to demonstrate your value- what exactly we are doing and the outcome it provides
- Systems thinking- beyond dietetics
  - SDOH, to the individual patient/clinical care level
- Data driven QI- Population health management
  - Nutrition professional can have a role at every level of public health
  - Data to maximize impact on community health- leverage to partner with community-based organizations (Increase performance for all stakeholders in PHM)
  - Data collection on effect of meal delivery and RDN counseling on health outcomes, patient experience, CHF, renal, chronic disease (especially for reimbursement)

Table 7
- Use RDNs that work with WIC to engage data from both WIC and SNAP, for households on both programs
- Non-traditional dietetics role → important to take a risk
- Adding research and data processing responsibilities to RDN job description: utilize our evidence based methods and knowledge of scientific method
- System level leader: thinker, facilitator, advocate for change, evidence based decision making - become a social influence
- Allow RDNs to move into quality positions w/n healthcare -- positions that are typically restricted to RNs
- RDN can take higher positions w/n companies: CDO - chief dietitian officer
- Implement use of smart technologies by clients (fitness trackers) to embrace pt involvement in nutritional health
- NSLP/CACFP - Medicaid?
- By being more big data driven, we can become more empowered to “make the ask” regarding salary increases, etc.
- Working with food systems & biodiversity to drive food production to be what people need to eat. Mirror nutrient needs from food.
- Train all students to value female & minority strengths and contributions
- Train RD/DTR in social influence

Table 8
- Incorporate nutrition informatics focused coursework into college courses and internships to better prepare future RDs
- Predictive modeling to generate new intervention and education strategies, reduce monetary cost and increase overall value
- Create a common language and foster interdisciplinary and interprofessional relationships to improve outcomes
- Include basic data management and analysis training for RDs to competently analyze, implement, and/or communicate with other professionals
- Improve health outcomes utilizing data
- Collaboration with IT designers in order to build nutrition-related fields and diagnostic codes into EMRs and EHRs
- RDs to become nutrition informatics coordinator/manager for hospitals, private practices, and more to track research and current/future practices
- Communicating with patients/clients through tech/AI in real time - attempt to make RDs more accessible
- Incorporating RDs into benchmark reports and data
o Develop into a leadership role and be an advocate for value of RDs role in patient care
o Using historical and epidemiological data to elevate role of RD in emergency response
o Get to know the needs of customers/patients and create a market for ourselves (be the influencers - market ourselves through AI)
o Branching out of our comfort zone, such as entering field of nutrigenomics (SNPs)
o Need to be reimbursed for our “influences”

Table 9
o Work in conjunction with other professional associations (other health professions) to elevate our role, not just self-promotion with AND

Table 10
o Practice area: Business and Industry
  ▪ Data sets: customers tracking results of enhanced recovery programs (data sets)
  ▪ Outcome: lower length of stay, lower narcotic use, lower surgery site infections
  ▪ Elevated role: sharing info with other customers to bring awareness and improve outcomes
  ▪ NSQIP
o Practice area: Clinical
  ▪ Data sets: DNA/nutrigenomics (example 23 and me)
  ▪ Outcome: looking at methylation SNPs (COMT/MTHFR) in eating disorders
  ▪ Elevated Role: RDN shaping precision nutrition/ individualized nutrition practice
o RDN in each providers app
  ▪ RDN- will see you now
  ▪ TeleHealth- tele Nutrition
  ▪ Lab data results delivered through EMR with RDN information in the area
  ▪ Real time
  ▪ Accurate
  ▪ Teachable moment
  ▪ Higher compliance
  ▪ Higher acceptance
  ▪ lower healthcare cost
o Executive leadership
  ▪ Public health data
  ▪ census data/ Medicaid
  ▪ diabetes/ obesity data
  ▪ outcome: improve overall health outcomes through appropriate services
  ▪ serve on or get appointed on local bds and commissions
o Practice area: Staff education, Clinical, Public policy
  ▪ Data set: Renal practice guidelines
  ▪ diabetic limit/ prevent complications of disease
  ▪ pt. may feel better improving health
o Early education
  ▪ diet in first
  ▪ stages of kidney disease
  ▪ REACH program
  ▪ RD should oversee b/c we look at total picture
o Consumer education
  ▪ data sets: CDC leading causes of death, nutrition related disease and conditions
  ▪ Outcome: provide public with evidence based nutrition services and products to lower risk and better management health RDN is the solution for services
  ▪ increased role of RDN as the nutrition health professional
o Public Policy use data sets to inform those in office when advocating for specific legislation “How we can help”
  ▪ Community: prevent chronic disease
  ▪ use appropriate data sets to drive sets to drive health fairs to communicate appropriate information to participants
o Practice area: public health nutrition, community nutrition
• outcome: increase food security among college students
• data sets: student demo, university services, state/federal services, student health/behavioral data
• Elevated role: leader in promoting food security among college students

Table 11
  o Merging multiple datasets to analyze trends in the field. Ex: NHANES + USDA portion sizes
  o Community based public health perspective: elected positions of RDN’s by providing expertise to integrate multiple datasets to improve community health
  o Google Analytics combined with NHANES around a certain connection to analyze correlations in behaviors related to nutrition (cross referencing the data to use in many aspects of the field)
  o Leadership in improving systems of policies related to food insecurity and health impacts on the growing population of older adults
    • Collect data and how to connect RDN’s and other health professionals from other countries to identify emerging successful strategies
  o Elevating the role of the student to analyze big data sets by making it apart of the DPD coursework
  o Food insecurity on a community based level by assessing individuals whom are receiving assistance (SNAP, Head Start, food banks) and trying to better understand the individuals that are seeking assistance. RD’s striving to comprehend what their households are like, with any similarities or differences. Could the lead RD be the role in this?
  o Dietitians in education spending less time assessing competencies but be able to identify learning needs more quickly and tailor student learning
  o Retail RD using data to inform the creation of a menu planning and shopping app. (“Alexa, help me get ready to shop.”)
  o RD’s being able to provide individual counseling with information based on eating and consumer patterns.
  o Placing a stronger emphasis on interdisciplinary work to elevate the role of the RDN
  o RDN’s sought as the true experts to understand and articulate safety in the food supply

Table 12
  o something that would benefit the community at large - not just hospital patients →
  o PR problem with the Academy →We need to create a unified front with an Instagram app and Google ads, billboards, search engine optimization, app and website. Get out there for the public to see us.
  o Unified front to use marketing → Update the website make it user friendly, create an Academy app that can be used by the PUBLIC, not just RDs.
  o We need to stop talking to each other, but begin talking to the public.
  o There are so many opportunities as an RD, and the Academy needs to help support that more and get that information out to the public.
  o Track CPEU’s by scanning badges in sessions
    • what are the demographics/characteristics of specific session attendees
    • used for planning future sessions
  o Opportunities for tech-savvy RD’s to help other RD’s increase their skills
  o Use research via AI’s to analyze the quantity and use of the term “nutritionist” or “health coach” and then use that data to protect the term RD via licensure and more
  o Use of Simlab to ensure more capable, confident entry-level RDs
  o “marketing”
    • trust/credibility
    • better results and outcomes
    • Help RDs - become more influencers
      • app
      • Google search
      • ads
  o The use of AI’s can make RD’s more accessible to patients and consumers, therefore elevating our role
  o Track bottom line outcomes/data to show real cost savings as well as general need for RD to encourage pay increases
  o Use AI to re-delegate work that RDs currently do, but could be done by AI.
Table 13

- Using big data from internet searches to identify patterns that RDN can intervene on by targeting ads for promo of public health/evidence based education and services/positive body image/health messages.
- Utilizing big data for rapid sharing and scaling of RDN best practices to reach the most people rapidly.
- Tap big data to get RDN engagement in policy
- Getting more people in the profession - use data and platforms (YouTube, Instagram) to promote dietetics k-12 (begin capturing sound bites to give youth an idea of what dietitians/nutritionists are).
- Evidenced based information coming from dietitians and not others.
- Twitter and google analytics available so RD’s can predict upcoming trends and get ahead of the issue before it peaks. Positions RD as leading vs. responding.
- Automatic feeds of food purchases - retail, food service, delivery, work, school - analyzed through AI so RD can focus on behavior change instead of info capture.
- Explosion of kitchen smart appliances - can be tapped on for Dietitians. How are we leading or feeding data into those to communicate information to consumer?
- How do we make sure an automated feed from out science based info into Wikipedia? Can we brand it somehow?
- All individuals retail food purchases to have it all in one place and dietitian can do analysis of the whole thing - may give us time to spend on behavior change.
- Self-monitoring glucose data - providing daily (flexible) meal recommendations using SMG device data to prevent hypo/hyper glycemic episodes.
  - Developing shared decision making tool between client and dietitian. Instead of didactic and preachy - elevate our role.
- Developing personalized meals with people with comorbidities in the hospital. Patient would have automated personalize diet through the use of EMR.
- Use of IPAD to develop referrals (from preliminary diet) for dietitians. Promote prevention and disease exacerbation by analyzing self-reported data (QI) at clinic visits via IPAD.
- More data would help us increase funding if we could show dietitians can help prevent conditions/demonstrate positive outcomes
  - No projections but more historical data
  - This could also be used for policy change and better salaries
- Be leaders in bringing tech/AI to facilities/governments/academic institutions who are behind
  - Research/engage RDNs in PR/media fitness companies to shape/tell the story.
- RDN - interpreter for genomics - nutrition biochemistry knowledge increase
  - understand pathways, lead interventions, lead research on interventions
    - AI collects/analyzes interventions
- Partner with companies heavily invested in improving health (or appearing to do so) and using AI; hold positions on boards/leadership of those companies and drive informational product (academia/private practice)
- Use of AI/big data to elevate role of RDN - tie data on role of RDN in health menu R & D at publicly traded chain restaurants and (stock price and/or earnings) positive financial outcome
- Use of data to track food waste management costs with reduced portion sizes as led by RD’s in food service operations.
- Utilize current data/statistics/health disparities as well as research data on RD intervention to increase insurance reimbursement for care - elevating need for RD.

Table 14

- clinical realm: clinical data can influence care we give, referrals that are made, could also influence bringing RDNs more into policy, procedures, etc. at healthcare level; nutrition importance becomes acknowledged
- RDN involvement in policy making at government level: state, local levels etc. tracking of nutrition data
- more involved in school health using knowledge and data to show connection between school food and education
- RDNs designing interventions to see data and do community based interventions based on such; data reflected back to community
- Quality Improvement programs for interns - RDNs in practice stepping into roles of identifying QI and ways to fix - bigger role for RDN involved in QI
Self-confidence elevates own role

- larger involvement of RDN in feeding therapy
  - data on who’s being tube fed long term, pediatric eating disorder; refer to dietitian to help advance FOOD, not just feeding SKILLS
  - community informatics research and policy
  - integrate POS data with consumer choice tools; whatever content related to health data, survey data that is quality based. outcome would be to be able to better predict consumer choice, be able to improve health management as a result. dietitian able to outline better quality nutrition measures; consumer gets information that is customized to THEM - creates health profile

Table 15

- Predictive Analytics - CMH data experts to determine where MNT would be most impactful
- MNT App - what would RD do
- How to approach data access - do we know who/how to ask?
- IT/RD/DTR Data Collection designer proficiency
- Expand data gathered to increase sales to incorporate health/nutrition outcomes component.
- Elevated role - new grads data analytics (more than research)
- Big data/Al Proficiency

Table 16

- Insurance companies covering cardiac rehab, helping cardiac patients to attend cardiac rehab and build the dietitian up by having more people being able to attend Cardiac Rehab due to insurance coverage of the RD’s counseling as well as Corporate Wellness.
- How much money do RD’s accruing for the hospital when conducting nutrition focused physical exam? Elevating RD’s to conduct more NFPE’s to not only generate money for the hospital but save the money hospital money as well by diagnosing malnutrition sooner.
- RD Assessing nutrition diagnosis via nutrition focused physical exams and being able to write the nutrition prescription instead of going through a doctor etc.
- RD’s being able to order labs and expand our scope of Practice
- Use national & state data in breastfeeding rates will support indicators and maternal care to elevate RD for roles in policy, practice and resource allocations.
- IPE using AI in simulations for Dietitians to interact & other health professionals and show worth of the RDN.

Dialogue #4: Opportunities for Action
1. Knowledge Expansion

Table 1

- Training of students- what is big data and how is it used? - we don’t think about it and the potential to tap into.- need training for everyone: older generations may actually be more in need, maybe add to competency requirements or CPE requirements for current RDNs
- Food sustainability systems, understanding new technologies and how this will change collecting data- more conversations need to be had-unbiased curriculum for interns and students
- have higher level training and certification
- knowledge gaps of strategic marketing/PR for RDNs- how to let people know the full spectrum of a dietitians role- how to get the word out there
- big data collection of the new Cannabis trend and how it is affecting people and their ailments, especially in reference to their appetite
- maybe be required to take a course by NIH to use their data
- Learning which existing programs and databases available currently, how to use it, data analytics on large volumes of data, and how to interpret it, is it true accurate data?
- lifelong learning will help to fill some of these gaps in knowledge: seminars, webinars, forming partnerships to
utilize other people's knowledge
- Learn from other professions and how they teach their people about big data, not having to reinvent the wheel
- collaborate with NAHQ
- tap into outside influences

Table 2
- need more informatics training
  - data analytics
    - using from a variety of sources (etc. social media)
  - the availability of data sets
  - more IT training
    - Generations now are growing up with technology and it is basic skills for them.
    - being able to store and retrieve data efficiently
  - Millennials are more Tech savvy than the older generation, and they are underrepresented in professional groups/meetings
- VA system is country wide, they have the capability to collaborate with all 50 states for data, (clinical, food service)
  - might need a partner to make it more generalizable
- EPIC is used a lot
  - If they could get permission to collect data from everyone that uses it, it would be a huge data set. Could possibly help clinical research.
  - combine epic with other data sources, there would be a lot of data
    - they would need to know data retrieval systems to extract data efficiently
- Make developing data sets more efficient, make it possible to go where the data came from.
  - they could collect their own updated data from this area as well
- Need to make the curriculum better for current students to make it easier to understand informatics
  - How to efficiently read information and how to get the most out of your research
- Put more emphasis in the ACEND program on other areas, not just clinical etc.
- Systematic reviews
  - Go through all the abstracts to see if it relates to your question
  - Teach to use online sources to group your potential sources organized and stored. Also label as keep or do not keep.
  - Is the statistics background of students enough to get them through the program and efficiently to research?
  - Most cases no it is not. Most students do not have an in depth statistics course until their master’s program
- presentation skills are lacking
  - grabbing people's attention
- conducting research through social media for gender minorities
  - this way they can reveal their sexual identity to the healthcare provider and in turn can lead to better nutritional care
- social media needs to be utilized more efficiently
  - need to know what generation is using what social media form to know how to get the best responses
- social sciences
  - We need to know more about public health, being more sensitive to sexual orientation, culture, need to be caught up on demographics, things are not black and white, and there is a gray area.
  - Dietitians tend to be black and white, but that really needs to change with the changing times.
- critical thinking skills need to be better taught,
  - because we are constantly judged by that

Table 3
- Education: Not having students do enough classes in psychology in order to understand behaviors. Improve prerequisites so students have better education in different areas including data analysis, statistics, psychology, etc. Redesign education for undergrad into internship into RD to specifically provide education for these individuals that are more in tune in their preferred area of practice so they are more educated, prepared, and
better experts in their field. Adding certificate type programs.
  ▪ Training in more areas like exercise, prescriptions, neurology-more data sets
  ▪ Informatics and computer programming education and marketing.
  ▪ Leadership and feeling of empowerment as dietitians.
  ▪ More research and systematic reviews-educate how to do this.
  ○ Dietitians not as spokesperson for media. Need to better learn how to communicate with the public through media/social media. How can we become the spokesperson and feel confident in this role. Know when and when not to advocate for something. Media training needed in education. Need training to be better influencers.
  ○ Hard to make public listen to RDs because “nutritionists” in the media/social media have the public’s attention regarding health instead of evidence based facts.
  ○ Better training and ways to get correct information to the public. What is the RD’s elevated role for future training? Goes beyond what DPD/grad programs/internship is providing. We have to allow future RDs to have a better role in data analysis, statistics, marketing, media, etc.
  ○ Have dietitians be the ones interpreting the data after collected. We need to be the ones interpreting the results. Need to be both data driven and good communication skills.
  ○ We need to be the ones in charge of the big data sets to make new discoveries. Would be able to interpret data that we wouldn’t have otherwise.
  ○ Learn how to better use big data sets and how to interpret them. Academy should collect own data (like NHANES) and have own data sets to use. CHIS survey in California has own data and makes it available to everyone.
  ○ Dietary Guidelines - some areas where researchers make strong suggestions-once went to public, the messages got diluted.
  ○ Lack of critical thinking of public-want immediate results-dietitians need to better think critically about the data and statistics in a specific area of practice.
    ▪ Critical thinking skills maybe in Master’s program-expand on skills at graduate level.
  ○ Academy having own Wikipedia with evidence based information for the public.
  ○ Partner and specialize to specific areas. Understanding what data is available to utilize related to their role.
  ○ Want to be recognized in relation to PAs and OTs etc-better degree programs
  ○ Foundational knowledge, continuing education, and critical thinking skills to use the data that are available related to their role.

Table 4

○ The ability to collect the data in a uniform way-communication gap
○ Understand the awareness of the systems and database that is out there already or create your own
○ Can you create a data point out of that?
○ IT, coding, understanding how to build, using the data
○ Quality of data-what goes in, elevating the research
    ■ database are outdated
○ Quality assurance
○ Time and money
○ Dietitians need to be able to communicate with:
    ■ Unethical practices due to knowledge
    ■ Unethical code of ethics
    ■ not using evidence based practice
○ Social media-miss information
    ■ fake news
○ Level of trust of science
    ■ integrity
  ■ Consumers see this wrong information with TONs of different areas. It’s a huge disconnect with science.
  ■ Recognize on their decision making - Academy makes an evidence based document to counterpart the

  ■ Consumers do not trust our knowledge- due to online searching at home
  ■ Consumers are more knowledgeable now than ever
  ■ Reframing how to meet pts, because they come with more data than we might have
Find the trends within the recommendation
7500 DPG focus database
What do we do with the stuff once we get it?

- Gap in communication
- Gap in big data
- Information vs data

Table 5
- Awareness and encouragement of taking:
  - Informatics 101 by AND
    - 5 modules
  - 10 by 10
  - Health Informatics Graduate Degrees
- Provide more opportunities for AI education for practitioners
- Educators must figure out ways to integrate tech ed into curriculum
- Create ACEND requirements for CPs and DPDs to include AI/Informatics into undergraduate programs
- Educate dietetic interns on ways to incorporate AI into practice and how it is currently being used at facilities
- Add AI to continuing education requirements
  - State level
  - 1 hour every 3 years
  - (similar to ethics credit)
- Discuss informatics during state meetings
- Certificate by CDR
- Development of Nutrition Informatics DPG
- Create a dynamic video on nutrition informatics by defining it and detailing its use, purpose, benefits, future, etc.
  - Dietetic professionals involved in AI/tech
  - voiced by representatives of different specialties using AI
  - connecting the dots on how informatics applies to everyone in the profession
    - “What’s in it for me?”
- Optimizing information regarding informatics on eatrightPro.org
- Food & Nutrition Magazine tech app reviews have been helpful and are appreciated
- “Doris Derelian would be great in teaching the topic as she does with ethics!” - Judy
- Move away from considering the individual areas of nutrition and dietetics of clinical, community, and foodservice and learn how to apply an individual’s skills to each area of dietetics
- Portfolio reflects informatics as a value
- Webinars

Table 6
- Public policy and advocating for policy: more adequate education in schools
- Data science- coding and algorithms- lack skills to understand value- need statistician or data scientist to evaluate. Don’t necessarily be able to do it, but understand measurements enough to but be able to talk to them in a common language about data; be able to partner with this profession. Need basic understanding in order to communicate- to demonstrate our value
- Search engine optimization- results are skewed- understanding how to promote web sources to be on the front page of google
- Actual healthcare delivery- to care for a population vs fee for service- how healthcare service is changing to insert yourself where you can be most effective
- Understanding behavioral health to actually reach outcomes- to collaborate with health practitioners- some health barriers must be addressed before dietetic outcomes may be achieved- BH must be integrated into systems for long lasting outcomes
- Digital product design- what food checker actually looks like- be able to suggest trackable components- have more input and impact on digital tools out there and data being measured
- Learn multidisciplinary language for technology and data- to be able to ask the right questions
  - We do this for clinical setting
Interprofessional collaboration and Transition of care - continuum of care

- How that works - no communication from acute to skilled care. Understanding processes and how to fix them - how do we bridge the gaps and get people care at home and resources in the community - care management - collaboration with points of discharge to - understanding interprofessional collaboration to prevent rehospitalization. Nutrition risk identified with discharge to home - our responsibility to provide resources and communicate with social work when needed.

- Acknowledging technology is changing our attention span - changes in education materials - 12 second video could be more effective than a handout - brains are changing, we must adapt our education.

- Nutrigenomics and immunology - gut microbiota - how to help people build this up and individualize: opportunity for career growth and advancement
  - Also need more research in this field

Table 7

- Education / big data use to start earlier in schools; i.e. high-school, maybe even elementary school
- Academy to offer more informatics training opportunities for RDNs/CDRs
- Restructuring of educational curriculums to catch the "in between" lessons: research, data compiling, research, understanding data, leadership
- Require students to participate on legit research projects - assigned with a faculty member - with the goal to publish the research
- More rigorous competencies/projects during dietetic internship
- Incorporate specific informatics during the dietetic internship -- to vague currently
- Social media knowledge gaps
- Mandate statistics classes or something similar to that
- Academy to hold us accountable for our knowledge gaps
- Testimonies from academy members who are familiar with big data
- Understand why big data matters in our career and why it’s necessary to incorporate
- Bridge the gap between big data and our profession -- Big Data seems “far away” - still not incorporated into our daily profession yet. Need to be prepared
- Specific dietitians assigned to POS or big data sets
- More comfortable with big impacts of big data
- Ask the question “how do we get people to buy into big data?”
- What is the WHY behind big data or AI...important for people to buy in to it

Table 8

- Nutrition informatics
  - data mining analysis, management, and interpretation
  - communication and application of data
- Nutrigenomics
- Learn the business language and communication skills with leadership and other professionals to build rapport
- Increase opportunities for higher level education for current practitioners to remain relevant in all aspects of the growing field of nutrition and dietetics (similar to DPGs webinars)
- Create roadmap or “bundle” for continuing education for specific topics (business, informatics, etc)
- Standardize and elevate internship and master’s competencies -- ensure students learn to research evidence-based practice and conduct their own research
- Increase competency and knowledge of resources available at the national, state, city, and community level through pre-conference courses, conferences, and trainings
- Incorporate nutrition informatics focused coursework into college courses and internships to better prepare future RDs
- Interdisciplinary skills based training and internships
- Make resources for continuing/new education convenient and easy to access (e.g. roadmap)

Table 9

- How to access data and get the data you need
- What do I need to access and how; how to specifically ask questions
- Financial resources to access data
- Technology as an ethical CEU requirement every 3 years, technological literacy is critical and ethical care
- AND making sure it keeps up with technology, keeping current
- Organizational leadership - business and organizational leadership principles, within specific environments
- Health informatics - understanding measurement and evaluating it. Measurement and reporting
- Management training, even if webinars
- Communication about what we do, communicating with business; businesses have a different focus, between generations, different technological skill sets
  - What is our product, what is our elevator speech
- Social media information in addition to evidence analysis library
- Ask for the salary that you are worth
- Charting in nutrition instead of dietary
- Gap in programming knowledge, how to make apps and computer programs

Table 10

- Big data
- Genomics - needs to be more research in this area and is still a learning process for everyone, the application of it is new, learn more about people's predisposition to disease
- Knowledge gap on how they use the big data of genomics
  - patterns we can identify
  - look for associations
  - ethics (fear)
  - genomics is new, we need to learn more about
  - dietitians apply it to what they do
- Learn to read current research stop echoing the old information
  - going beyond what others have said in the past
- Be on top of public health before health problems occur
- Look at big data and see what health gaps there are and have someone on top of big data to predict public health outcomes, we need to be on top of the data what is the next nutrition need going to be so we can stay on top of it
- More education on big data
- Competency for data-related informatics
  - focus in on what all dietitians need to know
  - how to use data correctly
  - how to access data
  - how to collect data, clean it, and inform correctly -- complete data/accurate data
  - create data visualization (graph) so others can understand
  - communication based on the audience
  - how to present it
  - understand the best way you can collect data so you can do your job well
  - make a form in a certain way to make data easier to collect
  - standardized form
  - be precise in your language
- Ethics
  - How concerned do we need to be about data mining - if you're going to collect data, have a question first
- Gap of knowledge, our members do not know how to use big data to predict nutrition-related needs in the future. For example, we have 85 million people with prediabetes if they do not get that under control in 5 years they are going to have diabetes. We should be on top of that statistic and before casting the needs how we can help those people with credible nutrition services and resources. Get this under control and look at the trends based upon big data.

Table 11

- There is a sense of intangibility as we talk about big data. We have all of these great ideas but how to find the data that we need? What are the sources of data, who has them, and how does a dietitian get access to this data? How do we know what we can utilize and pull inferences from as an RD? Who are potential trustworthy
partners to work with? How will the data be protected in regards to HIPPA and website privacy protection?

- The Academy could have access to these databases and can provide them to RDN’s.
- Offering a minor in Health and Formatics to dietetic students
- Collaborating with statisticians to analyze this big data
- Requirement of an ethic CEU’s
- Knowing what data is out there and how to access it
- What data already exists that is relevant to nutrition professionals and how do we determine the quality of it?
  - The Academy formulating a Database Directory
- There needs to be an increased understanding on other areas relating to analyzation of big data sets.
- RD Bot used in online grocery shopping

Table 12
- Financial → Cost Volume Profit Analysis, Indirect Costs, benchmark against another operation
- We aren’t speaking the same language as our consumers → we say nutrition, they say food.
- We have a HUGE knowledge gap regarding AI, and we don’t know what we don’t know! We need more knowledge about available tools, and be able to collaborate more effectively with others on AI.
- Course on AI? Course on Tech? Nutrition informatics? Where would this fit? and application or action of these!
- Nutrition and Tech for RDs
- Do we make tech part of the Internship? Part of CPEUs?
- Lack of tools & resources → survey monkey being used and then exported to Excel to then be data-mined … but there’s got to be something better. Who and what can we use instead?
- Interface Andy and EMR to eliminate double document between these two portals.
- We don’t have to be tech experts, and we don’t need them to be nutrition experts.
  - We just need to be able to work together...
- We need a really good understanding of what this data means and how to use it.
  - Stats → Re-word these differently to make this information easier to understand // A stats class divided by practice group (clinical, marketing, etc) and need. Our stats are different than stats for management or business or even research.
- Advanced practice for technology and data → big picture concepts being able to be understood
- Use AI to create and extrapolate data, and then use statistician to help you interpret it as an RD and then provide it to the public.
- RD Bot → Shoprite has a pop-up section on their website that says “Chat w/ an RD”....why can’t this be on Doctor’s office websites, Hospitals, etc. RD Bot could be everywhere.
- Knowledge, tools, advanced practice, and resources for AI within each practice area ... AI and the use of tech that is relevant to your practice area. How would you use AI clinically vs. food service vs. marketing vs. corporate.
- Course in college → introduce students to the various roles as RD (and NDTR) and how AI could play a role within each of these roles
  - introduce this more than once, and then provide each and all of the discussed resources with all current RDs and practitioners.

Table 13
- Access to data: RD’s are not part of patient portals. If you’re not in a hospital you don’t have access to labs or medical records. Would help reduce healthcare costs.
- Knowledge gap - power of AI and big data to enhance our roles. Mandate to do ethics as PDP. Should we do AI and big data as part of AI and big data? Fear may be holding members from using that information that can be empowering? How do we make sure they’re getting this information?
- Members who are not on social media - how do you begin to understand how they’re used, how to understand google/twitter analytics to use it in the profession
- Gap of trust. If we used social media (Twitter), do people trust us over people that aren’t affiliated with the health field? How do we promote an elevation of ourselves using informatics and AI? Not because of lack of knowledge but lack of utilization of resources.
  - Trend of not trusting any kind of science - how do we reverse that?
• Maybe not start with the public
  ● Insurance companies (Susan Scott in AL). Blue Cross evaluated data that demonstrates RD services (any services) improve outcomes so their services are covered: needs to be done in every state, not only AL. Developing a business model for this or partnering with large corporations - need to develop data (it is data driven).
  ● Public policy in each state - why aren’t RD’s from AL presenting this in each state?
  ● GAP: KNOWLEDGE EXPANSION: utilization of/access to outcome data that can reduce healthcare costs which can promote RD services to foster trust from the public.
    o Model it for other states.

 ○ Venture capital funding - Blue apron, genomic startup companies. How do RD’s understand that sector? We don’t venture into that area.
 ○ Gap - how to be assertive? Better negotiators and find for ourselves. Starting to teach this in the didactic programs.
 ○ Infiltrate system - what our role is. Massive coordinated effort to change public’s perception. More people in media and PR - get ahead of the story, boards, leadership, academic dietitians. Finding out who are the strong influencers and how can we get ahead?
 ○ More RD’s in research - politically driven.

Table 14
  ○ Nutrigenomics: RDNs left behind in, needs to be in curriculum, standardization for requirement, not just in academic setting but also in training setting, some continued education requirements there for the academy
  ○ Inclusion of problem feeding with pediatrics, focus more on families and outpatient (community) as opposed to hospital settings, getting nutrition info from occupationalist, speech therapist as opposed to RD
  ○ Code of ethics: consider how RDNs are using data and how we interact with it regarding health disparities, revisit ethics with new technology
    • must be careful to know cause more harm; learn more about overall risks
    • agreement on how we use data that is consistent with values
    • don’t make vulnerable populations more vulnerable
  ○ need more biostatistics background, be able to take information and understand study design, program statistical software and program output; need to be able to USE and MANIPULATE information in a way we need to, learn how to ask the right questions regarding data sets
  ○ own understanding and ability to communicate the results of polls and comments
  ○ management/leadership skills - be able to compartmentalize to determine what steps need to be taken
  ○ Put presentations out, can be dispersed to people locally as skeleton/starting point
  ○ free resources, free data, more accessibility; resources there just need to be tapped into or how to bring up
  ○ Expert- how to connect expert to expert, mentoring
  ○ Coding - reimbursement, etc.
    • cost limiting accessibility to knowledge, technology, developing tools

Table 15
  ○ Identify the experts and what is already out there - Who are already big data/Al “experts” that are in our field?
    • Are RD’s excelling at this already and we just do not know? Just because an individual is not present at FNCE does not mean they are not there. How do we decide who is the expert? A database may not reflect who the expert is and the current RD may not think of themselves as an “expert”.
    • Need to work directly with other professionals who are experts in the field of big data/artificial intelligence/technology
    • The experts must be identified in order to educate the other RDN’s to effectively utilize the data in practice
  ○ Developing competencies or courses for future students based on big data/artificial intelligence/technology
  ○ Use big data to elevate our role as dietitians. It will help to identify consumer trends and who people look to for what services.
  ○ Are we aware that there are different learning styles?
  ○ There is a gap in knowledge of big data between the RDN to the client and vice versa.
    • Big data that we use is from the government or large organizations, but there is not a lot of big data usage between the RDN and Clients directly. Identify future trends.
We are unaware that the RDN’s can be a big influencer on social media. Other individuals are being the influencers, but we as knowledgeable professionals are not. We currently need to do a lot of reeducation because of social media trends. If we use trends and big data, can we get out ahead of the trend to bypass the misinformation being distributed?
  - ex: celery juice trend

Should fund more than research. We should be funding Big data, Venture Capitals, Start-Ups, and AI in addition to research.
  - Use funds to help fund influencers, members, etc. Predictive Analytics, Predictive ability. Based on these trends and based on the environment, this is what is going to be in high demand.

Table 16

- nutrition informatics committee – DPG group came from this group, transition of care, no standardization on TPN (needs to be addressed), making standards so that nutrition gets more attention, fighting for diet orders to be written the same way.
- more money for development in nutrition informatics
- Lack of communication - constant volunteers funneling through making it hard to keep communication lines OPEN
- COMMUNICATION
- Nutrition informatics listen to the RD’s and try to make sense of it and put it into place, collecting data and how they can get there
- being aware of all of the resources that are out there for RD’s
- making articles regarding nutrition informatics more personal to make people want to read it and more people might be more willing to learn more about nutrition informatics
- Do we care about informatics?
  - If people don’t care how can an informatics manager get people to be aware?
- The Academy of Nutrition and Dietetics needs to be more involved in nutrition informatics, and professionals need to be more involved in nutrition informatics through the academy
- Nutrition informatics website!!!!
- using informatics as a case study based activity instead of as a class, use it in the internship as a real life experience
- BRINGING IT BACK TO THE STATE!!!
- getting information out to the delegates so they can give it to their constituents (HIMSS)
- We are not getting information about informatics that exists to the public or those in the profession.
- Education on informatics to get more people to “buy” into it - at the academy level
- Creargin and infrastructure - having representatives on nutrition informatics
- How to get people to want to know more about informatics
- Getting people to understand Big Data - TERMINOLOGY
  - fill this gap with education and resources for the RD’s, bringing it down to the affiliates, start at a lower level of education (college)

Treatments algorithms through big data - proving outcomes
Strategic dissemination -
RD’s make informatics too hard and is not something that we think about, it’s adding more to our daily activities, it is not something that RD’s are taught when going through not only school but our internships as well.
Social media as a revenue for insight into nutrition informatics
  - SCAN - Webbies (3 minutes long) - free and to get CEPU’s
  - Podcasts
  - Free 101’s

2. Career Strategies

Table 1

- social media: how to market yourself and how to elevate their presence, how to be an influencer, social media analytics, creating content people are interested in, creating a tagline more than elevator pitch
- training people in thinking more creatively
get involved in your organizations committees for development of documentation screens and informatics and
knowing the structure of the different types of data when building
Seek opportunities- be willing to take a chance
Leverage other people’s strengths: for example to level up your visibility t (i.e. search engine optimization)
Finding mentors and someone who is in the role you want and how did they get there to help plan for your
path- BE BOLD! Don’t be afraid to ask
Speak your future into existence, you have control over your future
As leaders you should have a succession plan- help others learn how to do your role
Be strategic with your future- position yourself for the next steps, have a strategic plan, be proactive as to what
your next step is
Students really need to volunteer and network for their future in the fields they are aspiring to be a part of- talk
to anyone and everyone
Have a database to follow students to track their success- how did connecting/networking help to expand their
careers, specifically networking within the Academy and serving the Academy- how did networking with the
committee help them

Table 2
- Training/educational classes
  - Training in informatics, IT
- Work with other dietitians
- Good knowledge of marketing, business, self-promotion
- Put knowledge of big data into the curriculum/a competency
- Business skills
  - Feasibility
  - Business development/management
    - Fundraising
    - Grant writing
    - Speaking skills
    - Financial
  - Business plans
  - Contract
  - Owning your own business and staying up to date on marketing and the current trends
  - Need to seek out further training and skills related to creating and opening a business, this includes
    being able to ask for money, business plan,
    - Example: dog treat company I created, marketed and branded
- Blogs
- Live streaming videos
- “Marketing yourself online”
- Public speaking skills
  - Join TOAST Masters

Table 3
- People feel dietitians are not on committees or on a healthcare team. Dietitians need to be the ones leading
  the team in nutrition and seen as an essential part of it. Have to be more confident and maintain networking
  skills/social skills to do our jobs. Need to speak up and be heard/known utilizing data-driven knowledge. Want
  to be known as the nutrition experts and interpreter of data.
- Position yourself as a leader or subject matter expert by seizing strategic opportunities.
  - Dietitians can volunteer for committees.
  - Be strategic in saying yes and no to certain requests or opportunities- be focused in your role and not
    go much beyond that.
  - Prove worth and value and then make your value known - receive benefits.
  - Think outside the box and communicate with references/sources to get new opportunities.
  - Pick your friends wisely. Don’t just communicate with Dietitians-communicate with doctors and other
    members of the healthcare team that you can prove your value to and network with.
  - Learn how to communicate with people of higher status (CEO/CFO) “elevator speech”.

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Need to be more aggressive with our position. Used to be what the doctor says goes—not the case anymore.

Create your own positions and be self-assured.

People just want solutions—not hearing about problems and issues. Understand what is going on outside of your position. Educate yourself. Involved with other departments.

Have a “mentor” to network with and go to person.

Have to find a place where you specifically fit in and the culture that best meets your goals.

Have to challenge yourself and keep self-improving—not become bored.

Understanding different generations in the profession and how each one uses technology.

Table 4

- Collect more data
- Certificate of training program - data informatics
- Barrier - comfort w/ or confidence going outside a strict RD
  - need to be a broader bigger role
- Change is uncomfortable
- Educating others about moving out to bigger roles
- Example: Medicare not covering prediabetes (not sick enough, get sicker)
  - Insurance not covered?? To be followed up with them to see how they are doing and figure out a plan
- Food production (Better for you foods)
  - Shared kitchen
  - series of course to produce a product
  - Dietitians getting involved in new food products
- Taking knowledge out of your lane, stay in lane for scope
- Marketing to other stakeholders
- Were the expects go to them
- Lulu Lemon - cafe in Chicago; food, health, passion
  - Looking at nutrition
  - all connected and can all be a part of it
  - We have to go to them
- Diverse types of foods based on the American diet vs cultural
  - People providing adequate nutrition care w/ language barrier
  - Cultural competence w/ nutrition care
  - Multilingual
- Taking on different roles in the clinical setting using data and use it for different skills for management, public health, research, department heads, budget, etc.
- Reframing skills
- Professional leadership - volunteer
- Money is power (we do not always think about it or maybe we are not always subjected to the data)

Table 5

- Develop mock food purchasing tools etc. for students to learn the business side of nutrition and dietetics
- Interprofessional experiences for students
  - collaborations between university IT/Computer Engineering and dietetics students to develop apps and other nutrition tools
- We need to be the app designers and then hire the IT professionals to create and maintain the application
- Industry sponsored AI startup/business plan for new tools/apps
- Career strategies
  - encourage entrepreneurship
- Informatics scholarships
  - seek out a partnership for scholarships
- Subscribe to industry e-newsletters
  - be aware of current technology available
  - e.g.: mobihealthnews.com
- Create a dietetics “sharktank” for business ideas and entrepreneurs
Table 6
- Work with ASCEND to change didactic requirements to fulfill competencies
- Have RDs leverage NDTRs
- Specialization
  - Internships - expanding the range passable internships; ex- go into something like informatics - more specialization in internships and practice
  - Not everyone can do everything,
  - Look at more specialization within dietetic profession, provide tracks for this, allow for part of internship hours to be in the specialized
  - Future education model: competency based would provide an opportunity
  - Decreasing pool for internships; RDs in unique roles are not often in precepting position because not as associated with the dietetic profession
  - There is no data supporting how many hours of dietetic internship produce effective dietitians
- Having a seat at the table - having a voice on committees or task forces - National quality forum, surgery teams, public policy and health committees,
  - Spans from local level and organization up to policy, advocating and pushing ourselves into regulation; equals in team based care
  - How renal care is transitioning to home care - figuring out where RD falls; being part of a team
  - Considering the political climate and healthcare - need to be included in the conversation to be included in coverage for care
  - Educate our students at a younger level to get involved in public policy: include a course because some education for this competency can be inadequate
- Getting people in states with in touch to build competency and continuing education - with policy issues, care, etc. Model: project ECHO - Tool to connect people, in rural areas or specific DPGs or RDs practicing solo, people creating dietetics education programs

Table 7
- You need to ask the questions, do the extra reading/projects/research, put in extra work, take more trainings, get more credentials
- Do not be afraid to write your job description
- Find an experienced mentor to help you get to where you want to be career wise
- Relationships with coworkers from other departments
- Don’t be afraid to fail and step outside of your role
- Trying new things

Table 8
- Interpreting data and applying it to our profession
- Elevate business/AI language to demonstrate skills and elevate value for RD
- AND nutrition informatics director/statistician to support its members
- Microlearning (webinars, podcasts, social media platforms) -- Credit Bytes instead of credit hour for continuing education
- Make resources convenient and easy to access for patients/clients
- Learn how to make big data work for us -- make it individualized or target population-ized
- Apply and present big data in a new and relevant way that offers examples and solutions
  - DPGs, HOD meetings, PAND, testimonials, microlearning
- Use big data to offer programs and services where they do not currently exist
- Create new job descriptions/positions and nontraditional roles - think outside the box and be the influencer!
  - Set clear expectations and competencies
  - Increase value of RD

Table 9
- Full coverage from CMS
- Having a mentor, esp. one that is not within your own area, or in executive level of company/organization we are in
- Market ourselves as being able to work with app developers
- Lift each other up
- Updating LinkedIn, follow each other
- Curriculum for education
- Certifications such as CDEs
- Networking
- Being part of other groups in the community that connects us with other areas and elevates career
  - Volunteering in areas other than dietetics

Table 10
- We need dietitians who are getting training in informatics and helping inform that
  - this could be a certification
  - funding for dietitians to advance degrees in informatics (scholarships)
  - undergraduate classes
  - need an advanced degree
  - interviewed and said she has what skills and communicated skill set to be able to get a job

Table 11
- Webinars related to Informatics for RDN’s
- Incorporation of big data analysis in student education through interprofessional learning with other majors
  (Ex: computer science majors)
  - Increased connection with other professionals
- Instilling a curious mindset in students that promotes continuous learning in many other fields
- Aligning with other cutting edge professionals to stay up to date with trends
  - Academy becoming more aware of what is available and sharing that information with RDN’s
- Increased awareness and learning the language/jargon of big data and algorithms
- Understand how we can best use this big data and do so in an ethical and consensual way
  - Requirement of a CPE related to informatics

Table 12
- It is about who you know. First and foremost! Some people have better and more opportunities, but networking
  within your professional field and outside of it can help advance you further.
- We (as RDs and the Academy) talk through so many of these concepts over and over again → and yet nothing
  changes. Within a department, they don’t do anything without the intent to publish and report on it … she helps
  people climb the ladder (personal leadership development) she doesn’t want them to get bored, but encourage it to
  take things a step further…this encourages retention, and it helps her staff stay on with her, despite their job role
  staying the same.
- Forces research within the field to encourage evidence-based practice published JPGEN, Breastfeeding medicine,
  JAND, podium presentations, poster presentations, published within the journal, etc.
- Also helps build confidence because they know they are doing big things!
- Internal and External marketing to help with leadership growth and development; help people grow, take
  accountability, ownership, gain confidence
- Monthly videos with varying topics and then followed up with phone calls to discuss these topics
- Topic examples: “how to ask probing questions,” // “how to be more confident when having a difficult conversation”
  // time-management
- Giving them skills that are beyond dietetics
- Enough to win 7 out of 8 awards (when Andrea’s group represents 2 states!!!) within a National company.
- C-suite
- Peer to peer communication → talking as people first to build confidence and make those connections.
- “kill em with kindness”
- They’ll respect you and hear you differently, build trust and relationships.
- Leadership, training, networking helps elevate!

Table 13
- Informatics: enhancing AI to prepare students and practitioners to be role models
  - Empower members. What are we going to do to make dietetics better?
  - Not just about students. Depends on the environment and practitioners today.
  - Podcast series on dietitians who are in technology driven field.
Informatics DPG
- Targeting people in tech fields and want to come into the field
  - Healthcare system - people already working in informatics
  - Annual leadership training - something formal
  - Management training - Teaching on communication skills. Being professional.
    - Programs are condensed - fast paced to be more efficient.
  - Videos/Podcast highlighting RD’s in tech/AI that have stepped out of their comfort zone and how to get there to show to students and potential future RD’s.

Table 14
- utilizing data and information to sell ourselves; this is why you need me in this role, exhibit a, exhibit b with data
- using data to secure new opportunities
- backing up claims
- being okay with not having all the answers
  - Relying on partners to help, builds interdisciplinary trust
- AI can’t replace human side of practice
- Getting on committees
- Getting in the door!
  - open gateway for others, policies, etc.
- Continued learning, thinking outside of other skills you want to develop
  - life long learning
- Approaching app companies - how can I help you make this better?
- Partnering and collaborative, respect and elevate each other
  - can elevate your own role without bringing down others
- Both evolving in current job growth, or to acquire new job
  - why? be able to explain the NEED
  - using data to predict changes when job changes

Table 15
- The Academy should value or support nutrition entrepreneurs?
  - What are the barriers to nutrition entrepreneurship?
    - ex: health insurance, wanting to work for someone else instead of for yourself
- Encourage/Support nutrition influencers on behalf of the Academy.
- Career-wise how are big data trends applicable
- Find who is already in these roles, who are the experts and learn
- Potential employers describe/identify what they need, how employers use big data to identify what they need in their dietitians.

Table 16
- More programs in nutrition information for students to choose from, not just dietetics (Degree), more education on nutrition informatics
- specialties within the dietetics profession when going through school, need more educators
- Outcome based research and connecting nutrition informatics
- training students to link to nutrition informatics
- As an RD setting your worth by using data
- Letting students be a part of your research
- Talking money, how do you put a value on RD’s and what they have to offer?
- Can’t always do things for money because although we would all like to be making money for what we do, if we always charge for our services someone is going to do it for free and they aren’t going to be an RD.
- RD’s tend to alienate themselves, so we need to add value to our profession
- How do we stop people from going to other professions for nutrition education?
- Master’s Program to add 1 or 2 informatics courses, technology and dietetics courses
3. Collaboration and Cross-Pollination

Table 1
- NAHQ
- other healthcare professions and organizations and how they are educating on big data - i.e. American Nurses Credentialing, American Medical Association, American Academy of Pediatrics
- Partner with Agricultural Associations that support and have data on soil health, water, food security, climate change, less toxins in fertilization, etc.
- Partnering with ag to help teach dietitians about agriculture, soil benefits, farming and global farming issues, sustainability, etc.
- Landcore- non-profit that deals with soil/land health
- Humane Society- how to cook more humanely- teach chefs how to plan and create plant-based foods
- NDNQI and Press Ganey for patient outcome database

Table 2
- EPIC collaborating with other companies
- 3 sectors to come together
  - industry (healthcare)
  - government/non-profit
  - academia

Table 3
- Networking and partnering with other allied health professionals to cover all of the topics and information one over the other might not know/not an expert on.
- Different specializations within the field may overlap. Too many member groups-expensive.
- Sponsorships can be important
- Allied health professionals collaborate within the academy across groups and with computer informatics people because that is not their area of expertise.
- Destigmatize roles
- Collaborate with legislation
- Often staying just within scope of job and not branching out- join committees and create your own position and environment outside of your traditional scope.
- Nutrition Focused Physical Exams- be more involved and educated-adaptability and new norms for scope of practice. Push the boundaries for scope of practice.
- Actively participate with key stakeholders including national and international bodies that have the capacity to help us to expand our scope of practice.
- More involved with other international bodies-World Health Organization. How can we be represented at national non-profit level? Have a dietitian at the table as advocates.

Table 4
- Food industry
  - Biofeedback device- monitors (real time information
  - Collaborate
    - Have dietitians to go different meetings, not limited to health professionals
    - Other professional organization- exact same issues w/ science, product development, professional organization
  - Media and entertainment- “what the health”; we need a
  - Smart homes- kitchens are getting smaller, work- pantries are getting larger
  - Nutrition workplace wellness
  - Insurance companies - Blue cross blue shield
    - Need to have a data collector for private practice - new role in informatics for RDs
    - Need to be able to prove the outcomes so we can see the impact and share with others that their services
    - Create a tool so have the informatics
    - Academy toolkit
  - with EMR platform to cross pollination and app developer
- Academy create app for data and sync with EMRs

Table 5
- Informatics scholarships
  - Seek out industry partnerships for Big Data scholarships
- Create a role for supermarket dietitians who work on a corporate level with a focus on Big Data and Nutrition Informatics to lead project development for tools/apps
- Interprofessional experience for students - there is a need for an educational model to aid educators in incorporating the ACEND learning requirement in the classroom.
  - ex: Multidisciplinary poverty simulation is an example of how one university brought multiple disciplines together
- Collaboration between allied health professionals within facilities on tech education and use

Table 6
- Developers, IT, data analysts- having the language to cross-collaborate and partner to build the bridge- RDs are equipped to gain knowledge and close gaps-puts us in leadership positions
- Communicating effectively with social workers, behavioral health
- Younger dietitians becoming more politically active

Table 7
- Relationships with coworkers from other departments. Find someone that you trust.
- Be accessible and available and approachable to people
- Share knowledge - utilize every opportunity to collaborate
- Collaborate with people in tech and IT - HL7 international - standards for health information storage and sharing
- Disposition → underlying foundation for collaboration
- “Play nice” with other departments. yes we are experts on nutrition, but also need to be aware that we can’t be rude/closed off to others who try to talk about nutrition
- Sim lab - opportunity to cross collaborate with nursing, PAs, Drs, med students, pharmacists
- Volunteer to be on different committees
- RDNS to initiate collaboration
- Set up pipelines for collaborations to continue on after initial set up was made
- Sustainability - institutionalizing committees and policies
- How do we value risk? or how much risk are you willing to take? informed risks vs no formed risks?-- lots of government data sets have failed before, but it’s worth the risk

Table 8
- Think outside the box - collaborate with people outside your field (IT, data analysts, businesses, food industry, academic professionals)
- Connect PDP to resources
- Be creative with the resources you have -- utilize students/interns to create mutually beneficial partnerships with companies/organizations
- Improve Care Now’s Exchange (sharing programs and practices in Pinterest form)
- Collaborate with insurance companies for datasets
- Expertise Share - invite professionals from other fields to train you and your staff members
- Career Exchange or Swap - experience other job for 3-6 months
Table 9
- Continue being involved in public policy
- How is AND collaborating with other organizations?
  - Partner with American Heart Association
    - RDs could volunteer for these organizations, to do talks, take questions
    - Explain to them that we are aligned
  - Health-related non-profits
  - WIC collaborates with NJ Academy of Pediatrics
  - American Academy of Pediatrics
- Want to gain exposure, decision-making, influence, be paid for our expertise, to advance our profession
  - Better continuity of care
  - Validates us to the public
- Ensure that agriculture professionals know about us, and that we have something to contribute to that
- Education on who we are and what we do. We need to show up to the table in order to do this.
- RDs are focused on doing good
- Health Resources and Services Administration oversee Bureau of Primary Care (gives FQHC money) → goal is to make sure there is an RD at every BPC office
- Have more spokespersons, i.e. one in every state

Table 10
- Collaborate within our profession
- DPG
- CDR
- HIMS
- ASCEND
- Foundation (scholarships)
- NHANES
- CDC
- Train nutrition professionals to understand data who can teach the rest of our profession
- Nonprofits that work in health
- Registries
- Applied within our practice if you have the understanding and know what questions to ask and how to present it and how to find an expert and connections then create a need this shows all the different areas where we can cross pollinate with other practices.

Table 11
- When working with big data collaborate with.....
  - Data analysts
  - Subject matter experts to help interpret data
  - Cyber security experts
  - Quality assurance professionals to assist in the process.
  - Statisticians
  - Computer programs
  - Epidemiologists

Table 12
- Stakeholders: → tech companies, insurance companies, CMS, grocery stores, health and fitness clubs
  - Primary care providers (establish needs and then drive their patients to dietitians)
  - Hospitals
  - Clinics
  - Government Agencies
  - Universities
  - Smart Watch companies (Fitbit, apple watch, Garmin)-how can we use their data!
- Those in the realm of ethics →
- How do we help people be the healthiest they can be → without making them liable to be discriminated against
Use that data without abusing it
Collaborate with tech companies
Collaborate with other professional organizations to promote ourselves→ example: AAP → link to our site, rather than them having nutrition info there.
allow information to be concise and all the same
Come to a consensus on platforms and what is used and supported by various professional organizations.
It is a political and financial debate on where we want the Academy Logo placed on food items, marketing materials etc.
Where do we not collaborate?
Where should we not be working?

Table 13
- Insurance companies collaboration
- Cross benefit analysis
- Health tech companies, nutrigenomics companies
- Universities - interprofessional collaborations - (ex. PT and engineering).
- CPG companies and retailers have data (point of sale data). How do we integrate this?
  - Understanding data sets, understand their power, what can we do with this?
  - How can this data enhance my practice?
  - Public health RD in store connecting with clinical RD
  - Data from government - how to access it? How to use it? Census data. How can we expand this data to practice?
- LEADERSHIP mentors, more conversations and more support: committees, task forces.
  - FNCE can highlight collaborations that have been successful
- Strategic planning: Identify who they are
- Identify how they may be able to benefit from this collaboration with the dietetic field (what are their priorities, goals, etc)
- Pilot projects - funding.

Table 14
- Partnering with geospatial agencies
- Disaster relief partnership
- DME (durable medical equipment): provide supplies for tube feeds
- Innovators!
- Agricultural
  - farmers, sustainability,
- Integration with startup companies
  - consumer products that we could be involved in; touching masses
  - being aware of what consumer is in touch with; form relationships with those that have dietetic services
- Environmental impact on dietary status
- Seed and leave remnants of self
  - substance abuse treatments: SUDS
  - nursing
- Community leaders: firsthand experience of needs
- Tailoring meals for individuals based off of needs
  - MOW lacking therapeutic diets
- Food Banks - data on what people are coming for, asking for, what are we having a hard time getting for people
  - Incorporate recipe development, how can we help them prepare it in a healthy way or with health commodities
  - Feeding America - even larger amount of data!
  - Soup kitchens
- interdisciplinary collaboration: healthcare team
  - proper communication between providers

Table 15
- Can we look to another professional who may have used Big Data and AI to see how they utilize it (ex: nurses).
Need to collaborate with other professions. This could be a delegated responsibility.

- House of Delegates can send out a paragraph/survey to ask constituents if there is anyone already doing this.
- Cross-Pollination → nursing, technology, content creators, collaborative, Big data/AI conferences or organizations specifically.
- Finding the experts

Table 16

- Getting Big Data outside of our profession to other IPE’s, taking advantage of the opportunities outside of Dietetics
- Taking advantage of the data in your own profession
- Collaborating with IPE’s to evaluate big data for what could be useful
- get to know the coders at your facility so you can better work with them
- work with your physicians and nurses closer to create bonds
- Dietitians going to other conferences of other interprofessional teams
- join HIMSS organization at a state level, go to HIMSS conference
- RD’s looking at themselves as business people
- BUILDING RELATIONSHIPS
- TIGER
- money
- learning from others

REPORT-OUT - Dialogue #4

Table 1

- Knowledge Expansion: CDR - requiring CPE in nutrition informatics/big data as a part of the professional development portfolio - performance indicators/competencies
- Career Strategies: Have a career strategic plan and be proactive by seeking out opportunities and mentors by also networking and letting your career interests known.
- Collaboration and Cross-Pollination: Partner with Agricultural Associations that have data on soil health, water, food security, climate change, etc. for work with food sustainability

Table 2

- Knowledge Expansion
  - need more informatics training
    - data analytics
    - the availability of data sets
    - more IT training
      - Generations now are growing up with technology and it is basic skills for them.
      - being able to store and retrieve data efficiently
    - Millennials are more Tech savvy than the older generation, and they are underrepresented in professional groups/meetings
- Career Strategies
  - Business skills
    - feasibility studies
    - business development/management
      - fundraising
      - grant writing
      - speaking skills
      - financial
    - business plans
    - contract
    - owning your own business and staying up to date on marketing and the current trends
    - need to seek out further training and skills related to creating and opening a business, this includes being able to ask for money, business plan,
Collaboration and Cross-Pollination

- 3 sectors to come together
  - industry (healthcare)
  - government/non-profit
  - academia

Table 3

- Knowledge Expansion: Foundational knowledge, continuing education, and critical thinking skills to use the data that are available related to their role.
- Career Strategies: Position yourself as a leader or subject matter expert by seizing strategic opportunities.
- Collaboration and Cross-Pollination: Actively participate with key stakeholders including local, national, and international bodies that have the capacity to help us to expand our scope of practice.

Table 4

- Knowledge Expansion
  - Science distrust
  - Gathering data for evidence based approach is not keeping up with the consumer due to the consumer bring us “data” and working with them
- Career Strategies
  - Be the leader and influencer
  - Move outside your comfort zone
  - take your knowledge to other arenas- food, fashion, etc
  - WE HAVE TO GO TO THEM
- Collaboration and Cross-Pollination
  - Establish people - workplace wellness, bio devices, etc
  - EMR groups developers- format and structure more conducive to use
  - New role for RDs on informatics – more than just a certification, more complex

Table 5

- Knowledge Expansion
  - Create a dynamic video on nutrition informatics by defining it and detailing its use, purpose, benefits, future, etc.
    - Dietetic professionals involved in AI/tech
    - Voiced by representatives of different specialties using AI
    - Connecting the dots on how informatics applies to everyone in the profession
      - “What’s in it for me?”
  - Career Strategies
    - Create a dietetics “sharktank” for business ideas and entrepreneurs
  - Collaboration and Cross-Pollination
    - Bill & Melinda Gates
      - They recognize diet as being the number one cause of death in the US
      - Opportunity for funding

Table 6

- Knowledge Expansion
  - Data science (math, computer science, data and information) - understanding how to speak the language- engaging data analysts with no healthcare background
- Career Strategies
  - Need to be involved- strategic placement on boards/task forces that embeds the RD/NDTR in key areas that may relate to health policy
- Collaboration and Cross-Pollination
  - Communicating effectively with developers, IT, data analysts, social and behavioral health workers
  - Having the language to collaborate and partner to build the bridge- RDs are equipped to gain knowledge and close gaps-puts us in leadership positions
### Table 7
- **Knowledge Expansion**: What is the WHY behind big data or AI → it’s important for people to buy in to it?
- **Career Strategies**: Do not be afraid to write your job description if you think a dietitian should be in the room, then stay in the room.
- **Collaboration and Cross-Pollination**: You need to be a good collaborator before you can collaborate - need to be accessible

### Table 8
- **Knowledge Expansion**: Create a roadmap for those working in the field to learn new and relevant information that is like an intelligent wizard - for example PDP plan input areas to learn in next 5 years and provides resources on
- **Career Strategies**: Elevate our business language to demonstrate our skills (e.g. analytics), which can be achieved included in job descriptions, in the creation of new jobs/roles, or during annual reviews include the demonstrated skills
- **Collaboration and Cross-Pollination**: Collaborate with analytics teams (within own or any business) to engage in training. Invite experts in analytics to share their expertise and demonstrate how data can be used in our areas of practice.

### Table 9
- **Knowledge Expansion**: Use of AI and tech as part of our commitment to ethical practice, since tech is integral and ethical care, in order to take information and integrate it effectively. Establishing ourselves as the influence by having accessible content to members and patients
- **Career Strategies**: What will allow us to strategically advance our career? Picking opportunities to close the gap in nutrition representation, and being unapologetic in establishing value in our time, knowledge, and the need for an RD.
  - Partner with AHA, APA, ACA- there are not dietitians on their Board of Directors
- **Collaboration and Cross-Pollination**: Advocating for yourself in mentorship/mentee connections outside RDs is indispensable, and using this to advocate for the profession and our status and financial worth. “If you’re not on the table, you’re on the menu.”

### Table 10
- **Knowledge Expansion**: Gap: What is big data, why is it important and how to present it correctly?
- **Career Strategies**: Creating a specific competency with ACEND
  - undergrad class to address the competency
  - Creating a foundational class for current practitioners informatic boot camp for dietitians
  - Foundation Scholarship for advanced degree in informatics for those who are interested
  - Elevate dietetic profession
  - So we can have resources among our members so we can take it to the next level and help each other
- **Collaboration and Cross-Pollination**: DPG
  - CDR
  - ACEND
  - NAHQ
  - HIMS
  - Foundation (scholarships)
  - other sources of healthcare related data such as government, nonprofits, and public registries
  - what we are talking about here applies to all areas of practice

### Table 11
- **Knowledge Expansion**: The Academy formulating a Data Directory
  - A comprehensive list of nutrition-related to big data sets
    - How to access them?
What is their quality?
What is their cost?

Career Strategies

- **Strategy:** Understanding how we can best use this big data and do so in an ethical and consensual way
  - **Solution:** Requirement of a CPE in informatics for dietetic professionals (just one part of the solution)

Collaboration and Cross-Pollination

- When working with big data collaborate with:
  - Data analysts
  - Subject matter experts to help interpret data
  - Cyber security experts
  - Quality assurance professionals to assist in the process.
  - Statisticians
  - Computer programs
  - Epidemiologists

Maintaining a curious mindset through all of this and being open to all of the people that we don’t know we need yet.

Table 12

- **Knowledge Expansion** → Knowledge, tools, advanced practice, and resources for AI within each practice area ... AI and the use of tech that is relevant to your practice area. How you would you use AI clinically vs. food service vs. marketing vs. corporate.
  - Make this a CPEU and make it applicable to each RD’s practice so that they actually use it!
    - not just something they check off of their list // but something they actually use!

Career Strategies

- Caroline → within her department, they don’t do anything without the intent to publish and report on it ... she helps people climb the ladder (personal leadership development)
- She doesn’t want them to get bored, but encourage it to take things a step further...this encourages retention, and it helps her staff stay on with her, despite their job role staying the same.
  - Forces research within the field to encourage evidence-based practice
    - published JPGEN, Breastfeeding medicine, JAND,
  - Podium presentations, poster presentations, published within the journal, etc.
    - Also helps build confidence because they know they are doing big things
  - Leadership, training, networking helps elevate.

Collaboration and Cross-Pollination → Who do we not collaborate with? We should be everywhere! We are in all sectors. Working within AMA, APA, etc... and then have them encourage a relationship with AND and link our website on their website! Working within the realm of ethics → prevent discrimination once we have more knowledge on these individuals. (prevent profiling and vulnerability)

  - geo-spacial data projects! what food is where.

Table 13

- **Knowledge Expansion**
  - GAP: KNOWLEDGE EXPANSION: utilization of/access to outcome data that can reduce healthcare costs which can promote RD services to foster trust from the public.
  - Model it for other states.

Career Strategies

- Videos/Podcast highlighting RD’s in tech/AI that have stepped out of their comfort zone and how to get there to show to students and potential future RD’s.

Collaboration and Cross-Pollination

- Strategic planning: Identify who they are: health tech companies, insurance companies
  - Identify how they may be able to benefit from this collaboration with the dietetic field (what are their priorities, goals, etc)
  - Pilot projects - funding.
Table 14
- **Knowledge Expansion**
  - Code of ethics: need to understand risks, better understanding before usage, ramifications of unattended consequences
    - not making vulnerable populations more vulnerable
- **Career Strategies**
  How data shows opportunities for dietitians to get into new roles
  - Using data to support claims and how they change with the times
- **Collaboration and Cross-Pollination**
  - Partnering with geospatial agencies/organizations

Table 15
- **Knowledge Expansion**
  - Bridge the gap between RD’s and the public by using big data to identify future consumer trends before they occur. This will help us influence and create programs and practices in advance.
- **Career Strategies**
  - The Academy tangibly supporting reputable nutrition influencers using grants, venture capitals, education etc.
  - Predictive Analytics, Predictive ability.
- **Collaboration and Cross-Pollination**
  - Identify the leaders/other influencers in and out of our profession that are already in the big data field to increase knowledge. It will help with mentorship

Table 16
- **Knowledge Expansion** -
- **Career Strategies**
- **Collaboration and Cross-Pollination**

By collaborating with outside groups and other profession we can start to implement new courses in master’s degree, CEU’s for RD’s, we can become experts in informatics concepts and promote ourselves of why we are of value and can increase revenue in our area. Lastly, get outside of our Dietetics box.

**Dialogue #5: Missing Areas**

**Table 1**
- Resources needed to accomplish these things: hire people, budgeting, etc., planning ahead for these things, start to think about it now- again utilizing connections and collaborations to help accomplish these goals
- We need to keep pace, “get sexier”, be bold with the rest of the wellness industry
- Develop more databases and apps within the Academy so that information would be ours to tap into
- Tapping into the resources within the Academy within the different specialties and thinking larger on a global standpoint, utilizing to harvest/share data
- How to show a company that our costs are worth the benefit- need the financial impact data to back this up (i.e. paying RDs to visit with employees- insurance cuts/kickbacks)

**Table 2**
- reaching out more globally and outside the nutrition field
  - world health organization
  - UN
  - USA
- extension
- last mission and vision from the academy
  - were global
  - we can access these data sets
- educational gap
• with who can get the masters/undergrad
• as long as you have an undergraduate degree in nutrition and dietetics, you can have any master’s degree to take the RD Exam
• could develop graduate curriculum masters combined with internship with data analytics (course development)

Table 3
- Old school dietitians may struggle with new techniques/research/technology.
- Dietitians are not at the top. Other organizations are seen as leaders/experts.
- Profession needs to prove its worth.
- Prevention bills - slow moving
- Lifestyle change is not a quick fix.
- Come a long way from where the profession started but it still has a long way to go.
- Change procedure to become dietitian-beginning of undergrad-have better idea of specific practice area from the beginning.
- Have to become advocates of our own practice.

Table 4
- Ethical parameters using EMR with hippia/ IRB (Limitation)
  - De-identified
- Proving our worth to increase value, reimbursement, etc
- Value based care - we need to find our role
  - Big data can help us define that role

Table 5
- Knowledge gaps present among constituents
- Pre-meeting trainings were helpful

Table 6
- Food sustainability and insecurity, geo-mapping and food waste; tracking this data
- Expanding internship programs to provide more specialized and diverse tracks - specializing would enhance the profession
  - Especially in public policy, assessing data sets

Table 7
- Maybe creation of degree focused programs incorporating more technology: bioinformatics degree with nutrition focused, or MS degree in nutrition technology, etc. Similar to informatics nurse credential.
- apprenticeships or fellowships
- more than just epidemiology
- continuing education at all levels
- adding competencies

Table 8
- Follow-up from AND with specific action plan made based on the information gathered during this HOD meeting and workbook
- Make big data less boring or intimidating to professionals and consumers
- Comprehensive list of resources and big data that currently exist which are relevant and accessible to us
- RDs participating in more research opportunities utilizing AI/big data
- Lack of awareness among constituents and consumers about big data
  - Create focus groups to gain the perspective of consumers and increase awareness of how AI/big data can be used in a positive way

Table 10
- using other data sets outside the scope of nutrition which can put a whole story together
Table 11
- As a delegate, not enough to report back to constituents after this conference. What is a consistent message that could be provided to others after this meeting? What were the main topics that we discussed and improved upon in the House of Delegates today? Ex: a one page brief/summary of what we discussed at today’s meeting
  - Providing information to those that participated in the survey to address the language of what we talked about today.

Table 12
- Where is our starting point?
  - See modeling from other similar health professions
  - Identity crisis with “what does an RD do?”
  - $$$ available in the association → should we tap into that for our use?
    - Support form the Academy to streamline what we do internally
    - Task force → if established, these members will have their own regular jobs and requirements...We almost need one group that this AI Focus is ALL that they do!
      - keep in mind that all of us are busy → give us highlights and bullet points!
  - HOW are we going to do this? WHEN are we going to do this?
    - Should DPG/MIGs explore how to use AI within their field?

Table 13
- DPG/Informatics: Report on what is trending so we can be ahead of it instead of responding.
  - Could the Academy create a partnership with a company to be able to do this? State by state
    - Analytics from companies like Google, Twitter
  - Taking multiple datasets and being able to make predictions (from multiple research studies, articles, etc).

Table 14
- Getting outside the box
  - What do you think we should look at?
    - Reiteration of being okay with not having all the answers, collaboration with others who are experts in their field,
  - Synergizing and snowballing with others who have similarities
    - Committees, different circles

Table 15
- Find a way to advertise registered dietitians
  - Professional organizations should be publicizing the role of the RD
  - Creative, fun, and quick videos to put out to the public. Inject ourselves into the public and make the videos fun!
    - Video competition for Academy members and then publish the winning video to the public. Marketing should be included to provide the best video possible
  - We should develop apps regarding nutrition
  - Each DPG could provide a podcast. The Academy could have a program to support all DPG podcasts and they would be available to all professionals and consumers. Academy podcast group!
  - Incorporate curriculum of big data/AI at the master level/professional level to provide education to future dietetic professionals.
  - Reality TV show with dietitians

Table 16
- Nutrition informatics on the academy website
  - State nutrition informatics person
  - Discuss Member survey
  - Thematic analysis of the member surveys
  - Validity of big data
  - Data analysis how valid is it? Should we be using and trusting it?
Technology/Big Data
HOD Recorder Workbook

Fall 2019 House of Delegates Meeting

October 25, 2019

Table #: 19

Day 1: Friday, October 25

Dialogue #1: Data Sets

Question 1: Within your practice area, what data sets do you currently use?
Some examples are listed and may spark discussions
Scribe records the data sets under each practice area as identified by the participant.

- Business and Industry
  - SPINS/IRI natural and specialty foods database
  - Contracts with private company on trends to determine menus using data-driven selections, purchases, and consumers beliefs and behaviors
    Information from Nielsen, Datassential, GfK MRI, and Yelp
  - Retail Point-of-Sale Data

- Clinical Nutrition
  - Timeless Medical Human Milk/Formula Bar Code Scanning System database to mine internal data for product information.
    CBORD Food Service database for nutrient information and internal data mining.
  - Nestle and Abbott Product Guides - all via apps
  - Claims and encounters, HIE, as well as EHR data for HEDIS, Clinical Quality Measures (CQMs), and utilization/population health management

...
• Communications
  o Web and Media Analytics (current headlines, key searches and more)
  o CNN Health section
  o FDA recalls
  o Google Analytics - clicks for website
  o FDA - hot topics
  o Alerts for emails

• Community and Public Health Nutrition
  o NHANES, BRFSS
  o Claims and encounters, HIE, as well as EHR data for HEDIS, Clinical Quality Measures (CQMs), and utilization/population health management
  o American Cancer Society data collection, research database
  o American Institute for Cancer Research (AICR)

• Consultant
  o Electronic medical record
  o Wellness portals - related to participant engagement, programming, registration, monitoring, results, etc. Involved in the design, data entry, and data analysis and reporting.
  o Integrated data warehouse to include health, safety, disability, wellness, and other health related data all combined into one data system as coordinated with numerous vendors for the benefit of an employer exploring a total health care cost burden. Involved in the design, data entry, and data analysis and reporting.
  o Wellness, fitness, and nutrition apps - stand alone and integrated in the portal.

  VYFit
  Objective fitness portal for RD to send info to clients (coach)

• Education
  o MDR ConnectED Cloud
  o USDA DRI, Calorie King, Mediquatios
  o Access database for internship
  o Academy of Height, org - CV to AS - Blackboard
  o Zoom

• Entrepreneurial
  o Salesforce (customer database)
  o Giving Tree - Shop Right - RD would use - database for sales items
• Executive Leadership
  o Data to decrease health care costs across the facility and department

Bra vo wellness - physical activity -
Accounting databases

• Informatics
  o Salesforce (customer database)

HL7  LOINC
SNOMED

• Management
  o VSAC Food Allergy data set (value set)
  o Claims and encounters, HIPAA, as well as EHR data for HEDIS, Clinical Quality Measures (CQMs), and utilization/population health management
  o Census and meal data

MGie

• Other (any area not previously covered through the above)

  o

• Research
  o Analysis of large data sets (e.g., NHANES)
  o Grants awarded data - by region and type

Grant management data bases

REPORT-OUT Dialogue #1: No report out
Use information recorded in dialogue #1 in next dialogues

**Dialogue #2: Improve Outcomes**

Participants will use sticky notes and record examples of how Big Data/AI/Technology can improve outcomes in their own area of practice.

- Each member will write their ideas LEGIBLY on sticky notes. The content on each sticky should be recorded in the workbook during the report out and must be recorded by the end of the day.

- Business and Industry

  - Clinical Nutrition

    * Shopping list of diet restricted foods interfaced to grocery store -
    * Or type of restaurant & food appropriate

  - Communications

    * Find out where people are shopping for food items

  - Community and Public Health Nutrition

    * Be mentored with clients to change habits

  - Consultant

    * Literacy - people do what we know

  - Education

    * More tech savvy - personal communication
    * Goal: Use education of incoming students from the beginning
AUDITOR

Blue Apron
Partner in Fresh Shop - delivery services for delivery

- Entrepreneurial
  Look for opportunities to enhance existing big box store
grocery shopping - e.g. Target groceries, Walmart

- Executive Leadership

- Informatics

- Management
  Marketing B healthy foods
  Use food tracking databases to help stores market healthy
  foods of higher volume over apples to influence
  healthy food choices

Research

Public Health projects all areas able to track peoples
social - daily routine - where shop where live

REPORT-OUT Dialogue #2: Share two opportunities to improve outcomes and their corresponding practice area. Each group has 2 minutes to report.
The table selects two examples/opportunities to improve outcomes and their corresponding practice area(s).

1. Opportunities to improve outcomes:
   Practice area:

2. Opportunities to improve outcomes:
   Practice area:
Dialogue #3: Elevate Roles
Each person writes LEGIBLY on sticky notes 1-2 ways that the use of Big Data and AI technologies can elevate the role of the credentialed nutrition and dietetics practitioner. The scribe records the content from each sticky note.

REPORT-OUT Dialogue #3: Pop-Up (up to 1 minute per person). Anyone may raise their hand and once called upon can share their idea. Total report out time: 20 minutes.

Dialogue #4: Opportunities for Action
1. Knowledge Expansion
   Identify areas to expand knowledge and fill the gaps for credentialed nutrition and dietetics practitioners as related to Big Data/AI Technology. Record all ideas in the workbook. Highlight one unique, action-oriented idea from this area to be reported at the end of the dialogue.

More RAN: LEARN Coding
Language
Consider Master in Computer Science.
2. **Career Strategies**

Identify ways credentialed nutrition and dietetics practitioners can elevate their careers and roles to remain relevant in an era of AI and ever-changing technology. Record all ideas in the workbook. Highlight one unique, action-oriented idea from this area to be reported at the end of the dialogue.

*Encourage dual roles in both nutrition/dietetics and computer/technology. Find your current role in this space.*

*RN & NOTRE working for IT department.*

3. **Collaboration and Cross-Pollination**

Identify ways credentialed nutrition and dietetics practitioners can identify ways to collaborate and cross-pollinate, related to Big Data/Artificial Intelligence and Technology. Record all ideas in the workbook. Highlight one unique, action-oriented idea from this area to be reported at the end of the dialogue.

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**REPORT-OUT Dialogue #4 (up to 90 seconds)** Report one unique, action-oriented idea from each of the three areas.

- Knowledge Expansion
- Career Strategies
Dialogue #5: Missing Areas
What, if any other areas, do you feel may be missing? Record idea(s) that may not have fit into one of the three buckets.

Need more RDCs who have Education as a technology knowledgeable degree

Helpful to have town hall meeting speaking on why it's important to change into more to track &

Run reports. Why fill out a template associated to keep track of past strings.

REPORT-OUT Dialogue #5 No verbal report-out

Data collection has to become seamless

Have to make NCP open source readily available

So Med Records are available for staff to easily

Chart - all staff have to chart adequately. They are Amb, crit, public health, food service, private practice, Sports Nutrition, Peds -

Common language necessary all the way Though