

A Structured Approach for Clinical Education in Dietetics: Experience of Ward Dietetic Round Application in a Saudi Program

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Abstract

Developing competences and practice skills of dietetic students is a challenge for future dietitians in their clinical placements and work. The clinical nutrition program at King Abdulaziz University has lately applied a structured clinical education approach, which involve diverse tools in clinical rotations for senior students, which include their involvement in a ward dietetic round (WDR). The approach with other approaches used to deliver the clinical component of the undergraduate clinical nutrition program. The impact of the new approach was evaluated using student feedback surveys, instructors' reflections on the course, designed evaluation tool and achieved learning outcomes. The evaluation indicated the effectiveness and applicability of WDR tool in preparing for clinical placements. As a result, future application of the tool is recommended.

Keywords: *Clinical Education; Ward Round; Dietetics*

Introduction

Registered dietitians are members of the medical teams [1]. They have a vital role and superior connection with their client. The dietitian-patient relationship approach could help individual patient to stick to counseling with nutritional treatment [2].

Clinical nutrition or nutrition and dietetic programs have globally been proficient for less than a century. The profession took place in the USA in 1917. Equally, the UK acknowledged the profession in the Mid-30s [3]. In Saudi Arabia, Western dietitians established the profession in the 18th Century [4].

Dietetic educational programs are mostly didactic programs wherever they integrate between education and practice. In Saudi Arabia, these programs commonly fallen under health faculties. Holders of Bachelor degrees from clinical nutrition background, are classified as health specialists after completing a one-year obligatory supervised clinical practice or (Internship program) [5].

In Saudi universities, the total length of the dietetic course is five years, including the theoretical and practical/training part. Clinical placements mainly take place in hospitals and include fieldwork for senior students as well as the internship year. The theoretical and training parts are mainly designed as problem-based learning. Graduation is coupled through registration with the profession governing or authorizing body for health profession "the Saudi Commission for Health Specialties (SCFHS)". Nutrition and dietetics curriculums could have well-defined outcomes of programs. However, not all programs have defined competencies for dietetic students, for instance, in the contemporary dietetics curriculum in Europe, the United States of America and Canada [5].

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To achieve a well in-line undergraduate dietetic education program, a successful integration of clinical and educational elements is essential. It will also safeguard the readiness of students for professional practice placements in clinical settings. This will involve both educational and supervisory attentions [6].

Educators and practitioners have different viewpoints about the clinical training process for students and the value of their early involvement in patient care. However, the author's responsibilities as an academic educator and a dietetic practitioner simultaneously helped her guide the training process for senior dietetic students and interns for years. Additionally, author's responsibilities for many years in directing the nutrition and dietetic department in a university hospital and the clinical nutrition education program strengthen author's skills, in coordinating and conducting the training program for undergraduate students. Being the first national registered dietitian, who had the chance to have high quality clinical training under the supervision of international dietitians, enhanced author's skills as an academic staff to take the responsibility of the clinical education program [7].

The author's research interest in dietetic practice and education as well as the heading of the national and international accreditations of the education program since 2012, stimulated the author to consider evidence-based approaches when delivering a clinical education and training course and evaluating students' competences throughout. This has allowed students to be well-trained and gained good skills. Consequently, the best hospitals in the area have offered several professional practice placements to students in their internship and after graduation.

In this work, the author would like to share with others in the field of clinical education and practice the course coordinator's experience in constructing, coordinating and delivering a structured clinical education approach in dietetics. The approach was applied through a fieldwork course for undergraduate senior dietetic students. The Clinical Nutrition Program (CLN) at the Faculty of Medical Applied Sciences (FAMS), King Abdulaziz University (KAU) in Jeddah, Saudi Arabia provides this fieldwork course within its curriculum under the name of clinical rotation in medical nutrition therapy with the code number CLN 445 and CLN 447¹ [8]. The course is a 2-level, clinical education course, and this new constructed approach was applied in the academic year 2018 - 2019 with approval from the CLN Departmental Council Meeting's members. Thirty-seven students have completed the course under the author and other academic staff close supervision. Course instructors were PhD holders and teaching assistants with clinical experience.

The course is a two-day weekly hospital training and for 16 hours daily. The course included training in actual clinical and simulation-based sessions. All training events took place at the KAU hospital and the Simulation Centre of the Medical Centre at King Abdulaziz University. The Simulation Centre was used to conduct all simulation-based sessions. Training included areas of pediatrics, obstetrics and gynecology, medicine, surgery and critical care.

Methods

The structured approach for clinical education included:

- Pre-assigned readings prior to each hospital ward.
- In-class meetings held at the end of each training day.
- Simulation-based learning: conduct of different events were to introduce the course, for course review and evaluation exams and quizzes".
- The objective structured clinical examination (OSCE) was applied for the first time. The OSCE aimed to measure clinical nutrition competences and practice of senior students and to replace the exams' long cases.
- Inpatient/Ward Dietetic Rounds (WDR) using a bedside teaching approach.

¹Study Plan is available at: <http://nut.kau.edu.sa/Pages-Study.aspx>.

National or international dietetic programs could use any of the above training and evaluation approaches. However, the presented structured constructed approach used all the above-mentioned methods of clinical teaching and evaluation at the same time when delivering the course.

In this article, the author will concentrate on the training approach using the Ward Dietetic Rounds (WDR) because “to the best of author’s knowledge”, only few dietetic clinical educations are applying the approach. It is widely accepted that dietitians are part of the interdisciplinary medical team, who go on rounds and discuss patients’ plans of care. However, going on their own round is rare. The reason for applying this approach is to let students review and practice the NCP [9], achieve their self-confidence when they go on ward rounds. This could decrease their fear when going on medical rounds in the future. The WDR bedside teaching approach was applied for the first time in the 2018 - 2019 academic year. The approach required the application of immediate feedback process and clinical event debriefings by the end of the bedside observation. This application took place after evaluating students in their presentation to the conducted case study.

Methods for carrying out ward dietetic rounds (WDR) approach

- Assigning students into groups using the [(Peer Assisted learning (PAL)) [10] approach throughout the entire semester. Where course instructors randomly pair and rotate students in their assigned roles and case presentations.
- Each group of students (1 peer) is assigned for one case study per hospital day. This is to allow students to review patients’ documents, signs and symptoms, assess results and to design and plan the appropriate intervention by using the NCP.
- Rotation of student roles in patient case presentations was in each hospital training day.
- Bedside teaching approach under a close observation of the faculty members/course instructors was the main aim of the WDR. During the round, the course coordinator advised instructors not to take over the interaction with students while presenting their case studies to allow for the assessment of students’ skills.
- The student is to present the case study at bedside. However, presenting at bedside was only required whenever it is suitable. The reasons for the non-applicability of case presentation at bedside were in case if the patient was in isolation, the patient is very sick or did not consent to being seen by the dietetic team. Other reasons could be due to another clinical rounds operating at the same time, or if the student has a fear of presenting her assigned case study at a bedside. In addition to that, if the student prefers the case presentation in a different setting, she can conduct her presentation away from the bedside and faculty instructors will note that.
- Evaluate students immediately after presentation of the case at bedside using Dietetic Ward Round Assessment Tool Form (DWRAT)² evaluation form. The author adapted and modified the tool using different internationally published forms for evaluation [11,12]. The evaluation tool considers skills such as the student’s observation, recording, tabulating and communicating with the patient.
- Feedback process and clinical event debriefings: These two approaches are carried out by the end of the bedside observation and after the evaluation of the students’ presentation of the case. This is to allow continuous interaction between instructors and students and to grant the re-visiting of sensitive issues and responding to students’ questions. Using this two-way process between students and course instructors was useful in reinforcing good performance and improving the bad performance of students. Therefore, when giving and receiving feedback from students, instructors were trained to consider giving immediate feedback whenever needed, consent time for discussion, advise students to appraise their skills and enactment as required, encourage students’ reflection and self-appraisal, provide students with constructive criticism and use particular feedbacks to illustrate or enhance students skills and practice.

²See appendix for DWRAT

- To evaluate the effectiveness of the WDR approach, different evaluation methods used as illustrated in figure 1.
- In order to conduct and publish this work, the author obtained an ethical clearance from the Ethics and Research Committee at the Faculty of Medical Applied Sciences at King Abdulaziz University.

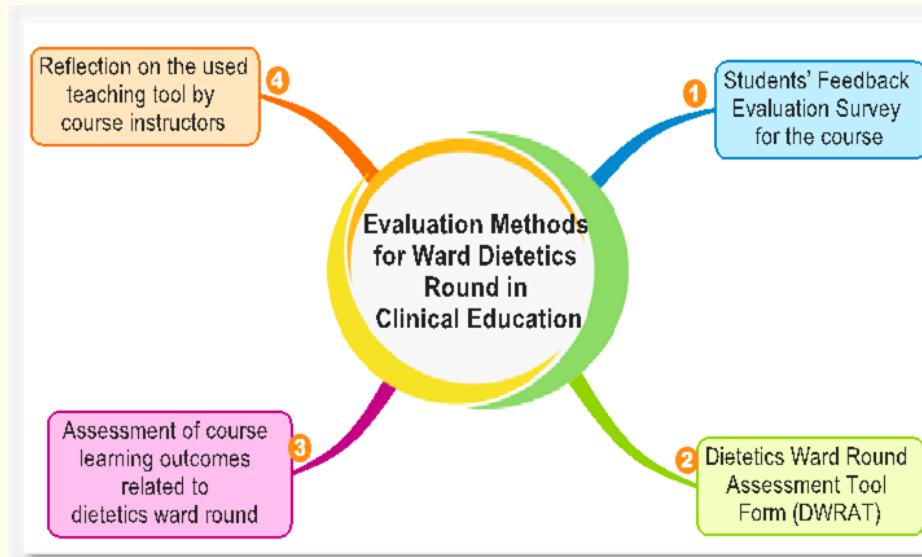


Figure 1: Evaluation methods for WDR approach.
*Source: Aljaaly, Elham (2019, unpublished work).

Results and Discussion

Evaluation of ward dietetic round (WDR)

Students' feedback evaluation survey for the course

General score to the delivered clinical education course was “very satisfied”, 56.5% (n = 13 out 23) were strongly satisfied or satisfied about the quality of the course, 82.6% (n = 19) believe the course improved their ability to communicate effectively, 78% thought the course helped them to develop their skills in working as a member of the medical team. About 83% confirmed the course helped them to improve their ability to think and solve problems rather than just memorize information.

In general, students throughout the course reported a positive impact on the delivered courses and were satisfied about the delivered course and the applied practical part, this could confirm the applicability of the tool to be used in following academic years. However, not all students responded to the students' feedback survey and some students did not respond to the qualitative questions, which should be encouraged in the future.

Dietetic ward round assessment tool form (DWRAT)

The allocated marks was 3% of the course and the average achieved mark for 37 students was three marks. This could encourage the use for future conduction of WDR. The evaluation form was detailed and included assessment of students' presentations to case studies in all assigned wards. Therefore, one evaluation form was completed for each student per each ward/unit. Units were obstetrics and gynecology, pediatrics, renal, medicine, surgical and critical care.

Assessment of course learning outcomes related to ward dietetic round

Referring to the course Learning Outcome (LOs), assessment related to WDR and the analysis of assessment results, six LOs were achieved. Achieved LOs are mind mapped as in figure 2.

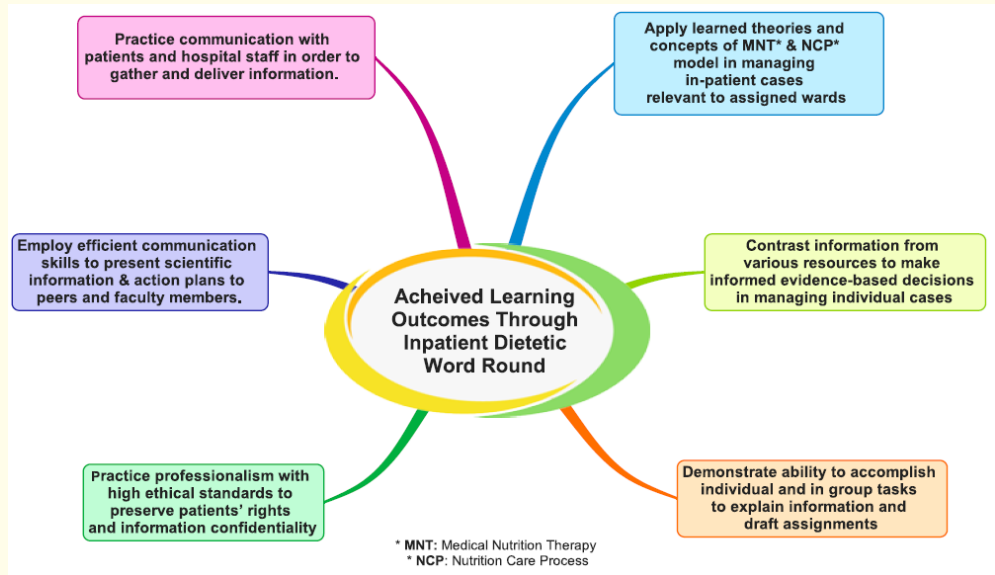


Figure 2: Achieved LOs through WDR.

**Source: Aljaaly, Elham (2019, unpublished work).*

Referring to the planned teaching strategies in course specification, the description of Domains of Learning Outcomes that showed good effectiveness for the used teaching strategies for learning outcomes set out for this clinical education tool (Table 1).

| Teaching strategies using WDR | Difficulties experienced in using the strategy and suggested action to deal with difficulties |
|---|---|
| Effectiveness of dietetic rounds based on the domain of Cognitive Skills | Although the dietetic rounds encouraged students to interact with hospital staff and the medical team, it was difficult sometimes to conduct dietetic rounds at bedside. Therefore, other alternatives such as outside the patient’s room meetings with students, or in class meetings are conducted. |
| Effectiveness of dietetic rounds based on the domain of Interpersonal Skills and Responsibility | The course instructors thought that DWRAT evaluation process is long and needs long time and high skills to be better applied for next course delivery time. |
| Effectiveness of dietetic rounds based on the numerical and communication skills | This was applied for the first time in this academic year and was mainly conducted by course instructors. However, when applied again, course instructors need to include external examiners. |

Table 1: Effectiveness of used Teaching Strategies for Learning Outcomes of the course.

Course instructors' reflections on the WDR tool

- In general, the course emphasized on enhancing the practical skills for students through effective communication and collaboration.
- The dietetic round has helped students to become more oriented with the course objectives.
- Students achieved better outcomes of the course through the round.
- Students became interactive and confident in presenting clinical knowledge.
- Students became confident in implementing NCP model for individual patients.
- Students were able to set clear treatment objectives and measurable outcomes.
- Students challenged different cases that developed their critical thinking and decision-making.
- Students improved their skills in case presentation and ADIME note documentation.

Based on all of the above, we can say that the bedside Ward Dietetic Rounds similarly to other ward round can be different in its aim and objectives [12]. The primary aim of this education intervention tool was to allow students to review patients' notes, signs and symptoms, physiological parameters, investigation results and to design and plan for appropriate nutrition intervention using the NCP. Rotation of students' roles for patient case presentation was applied in the two-hospital training days and immediate evaluation was conducted using the DWRAT tool. The feedback surveys from students, reflection on the tool by course instructors, the achieved average score for the allocated marks and the assessed learning outcomes for this education tool showed that WDR approach is vital in clinical education for senior dietetic students when applying NCP. Integrating the present clinical education approach with other approaches such as PAL will enhance socialization involvements with peers and the medical team, which could have an impact on both the student's academic motivation and accomplishment [10].

Using a constructed multi-level evidenced- based approach for conducting rounds and evaluating students during and immediately after the clinical teaching round is vital [13]. This is in order to facilitate evaluation for a number of dietetic skills such as students' applications for the NCP, professional communication with patients and colleagues. It could also develop students' confidence to present and discuss case studies with seniors in the profession and with other members of the medical team.

Conclusion

To conclude, Ward Dietetic Rounds, feedback process and clinical event debriefings are approaches that carried out in different inpatient wards, mainly at bedside. The academic course instructors who are clinicians observed the whole process closely, which allowed continues interaction between them and students. Course instructors for dietetic fieldwork courses are advised to integrate WDRs to their clinical education program to reinforce the good performance of students and improve their depraved performance.

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Appendix for DWRAT Form

| | | | | | | |
|---|---|---|---|------------------------------|----------------------------------|----------|
| <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <p>Case Study Evaluation: Dietetic Ward Round Assessment Tool Form (DWRAT) 2018/2019</p> </div> | | | | | | |
| <p>Name of Student: Ward Bed No. Diagnosis: Date:</p> | | | | | | |
| | N | D | S | Skills performed alone | Skills performed with peer | Comments |
| Part I. Pre-ward Round | | | | | | |
| 1. Reviewed patient’s file and potential problems highlighted | | | | | | |
| 2. Reviewed any relevant investigations or tests | | | | | | |
| 3. Communication with medical team with collecting data | | | | | | |
| Part II. Ward Round Duties for Patients | | | | | | |
| a. Communication with the Patient | | | | | | |
| 4. Introduced self to the patient in a professional manner | | | | | | |
| 5. Identified patient of concern name, date of birth and diagnosis | | | | | | |
| 6. Appeared confident | | | | | | |
| 7. Behaved professionally and respectfully | | | | | | |
| 8. Explained the case and related issues accurately and in an organized manner | | | | | | |
| 9. Reviewed histories (in the file) | | | | | | |
| 10. Conducted histories from the patient: e.g. asked about dietary recall, dietary restrictions, food allergies and weight history | | | | | | |
| 11. Reviewed patient’s chart and checked progress from admission | | | | | | |

| | | | | | | |
|--|-----------------|--|--|--|--|--|
| 12. Assessed nutritional status, e.g. oral, nasogastric, percutaneous endoscopic gastrostomy feeding | | | | | | |
| 13. Checked fluid balance | | | | | | |
| 14. Reviewed laboratory tests | | | | | | |
| 15. Reviewed drug chart | | | | | | |
| b. Diagnosis/decision Making Process and Communication with CLN Team | | | | | | |
| 16. Reported Patient Medical Diagnosis and Medication | | | | | | |
| 17. Reported possible food-drug interaction | | | | | | |
| 18. Reported Possible Etiology and Risk Factors | | | | | | |
| 19. Reported Patient Signs and Symptoms | | | | | | |
| 20. Made appropriate diagnosis using PES statement | | | | | | |
| 21. Made and introduced to the team appropriate and brief decision and Intervention plan using histories: medical, dietary and social, blood tests, nutrient and fluids intake, etc. | | | | | | |
| 22. Made and introduced to the team appropriate and brief plan for patient’s monitoring and evaluation | | | | | | |
| 23. Listened to patient’s and other team members’ views and answers questions appropriately | | | | | | |
| 24. Completed case presentation in appropriate timeframe | | | | | | |
| Part III. Post-ward Round Checks: Clinical Event Debriefing | | | | | | |
| | | | | | | |
| 25. Debriefed, engaged and had clear communications with the CLN team e.g. made, lessened, corrected errors, asked for and offered help to CLN team when needed. | | | | | | |
| Total Marks: | 50 marks | | | | | |

Please: Rate the domains using the following scale:

N = not observed or not appropriate **(0 Mark)**

D = development required **(1 mark)**

S = satisfactory standard (no prompting or intervention required) **(2 Marks)**

**** Please rate the overall complexity of the case presented:**

Low χ **Average** χ **High** χ

General Comments (If any)

.....

Instructor Name:

Signature:

*Source: Aljaaly, Elham (2019, unpublished work.

Bibliography

1. Russell M. "Registered Dietitian Nutritionists Should Be Included in Patient Health Care Teams". *American Family Physician* 99.3 (2019): 142-143.
2. Endevelt R and Gesser-Edelsburg A. "A qualitative study of adherence to nutritional treatment: perspectives of patients and dietitians". *Patient Preference and Adherence* 8 (2014): 147-154.
3. Winterfeldt EA, et al. "Dietetics: Practice and Future Trends". 3rd Edition, London: Jones and Bartlett Learning (2010).
4. Hwalla N and Koleilat M. "Dietetic practice: the past, present and future". *Health Journal* 10.6 (2004): 716-730.
5. Aljaaly E. "First Cycle Professional Higher Education Degree in Dietetics: A Comparison of Saudi Programme with the European Standards". *International Journal of Food, Nutrition and Public Health* 8.2 (2016): 2-10.
6. EFAD. "European Commission/EACEA: Thematic Network for Dietetics - DIETS2". The European Dietetic Advanced Competences (EDAC), Brussels: EFAD (2012).
7. Aljaaly EA. "Challenges and Reflections on the Experience and Development of the Profession of Nutrition and Dietetics: A Starting Point With the First Indigenous Dietitian in Saudi Arabia". In S Hameed, S El-Kafafi and R Waretini-Karena (Eds.), *Handbook of Research on Indigenous Knowledge and Bi-Culturalism in a Global Context*. Hershey, PA: IGI Global (2019): 95-119.
8. King Abdulaziz University. Study plan for Clinical Nutrition Program (2015).
9. Swan William I, et al. "Nutrition Care Process and Model update: Toward realizing people-centered care and outcomes management". *Journal of the Academy of Nutrition and Dietetics* 117.12 (2017): 2003-2014.
10. Taheri M, et al. "Effect of Peer Assisted Learning (PAL) education on knowledge, attitude and behavior related to prevention and control of diabetes". *BMC Research Notes* 12.1 (2019): 227.
11. Lye PS, et al. "Clinical teaching rounds: a case-oriented faculty development program". *Archives of Pediatrics and Adolescent Medicine* 152.3 (1998): 293-295.
12. Abdool MA and Bradley D. "Twelve tips to improve medical teaching rounds". *Medical Teacher* 35.11 (2013): 895-899.
13. Kumar S, et al. "The ward round assessment tool: a new workplace-based assessment tool". *The Bulletin of the Royal College of Surgeons of England* 95.6 (2013): 1-8.

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