

ASHP 2016 Poster Abstracts for National Pharmacy Preceptors Conference

Poster Title: *Developing a remediation plan for a pharmacy resident*

Poster Type: Descriptive Report

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Purpose: It is expected that pharmacy residents continuously improve their performance and clinical, professional, and educational skills throughout the residency program. If at any time, a resident's development is unsatisfactory and completion of program requirements for receipt of a residency certificate is at risk, the resident may be placed on probation. Each resident in this situation will have unique learning needs to get back on track, based on the specific areas in need of improvement. Thus, a standardized approach should be used to evaluate the resident's needs and to develop a remediation plan.

Methods: At the beginning of the residency year, each resident completes several surveys that serve as a baseline assessment of the resident's strengths (StrengthsFinder), experiences, knowledge base, and professional goals. These surveys are used along with a discussion with the resident to document a development plan. Resident performance is assessed on concentrated, rotational, and longitudinal learning experiences. The residency advisory committee evaluates this performance quarterly and may deem it appropriate to place a resident on probation, thus requiring a remediation plan. The standard method for development of the remediation plan used at our institution includes: identification of the specific areas in need of improvement, discussion of their top five strengths, selection of essential topics, and any special needs of the resident. Once these learning needs are identified, an implementation plan is developed that incorporates a variety of modes of delivery including direct instruction, modeling, coaching, and facilitation. An evaluation is also made to identify the best individual(s) to precept the remedial learning experience.

Results: The residency advisory committee identified a resident in need of remediation after the second quarter. A preceptor from the area requiring remediation, the residency program director (RPD), and Associate Dean for Postgraduate Education met to develop a remediation plan. Of the 30 disease states commonly encountered during the learning experience, eleven were selected as essential to demonstrate competence for the area. The preceptor selected 3-4 patients each morning for the resident to focus their attention. Additionally, the Associate Dean and resident met twice weekly for direct instruction related to patient cases. The resident's learning style was matched to the preceptor, which resulted in an increased emphasis in visual learning with greater use of diagrams and figures for illustration of information. An extra formal case presentation was added to the experience to improve communication skills. Additionally, the role of precepting for the resident students was removed to

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allow for greater emphasis on clinical responsibilities. At the conclusion of the remedial period, the preceptor, RPD, and Associate Dean reassessed the resident's performance, along with a self-evaluation by the resident. Performance and self-confidence improved through the remediation process, resulting in satisfactory performance on the remaining learning experiences and successful completion of the program.

Conclusion: Residents who do not perform to standards during residency training may be at risk of not completing the program. A systematic approach is needed to identify a resident's learning needs and strengths in order to develop a plan which incorporates the optimal preceptors and modes of instruction. By standardizing the development of a remediation plan, the individual needs of the resident can be better met. This affords the resident the best opportunity for completion of the program and on-going success in their career.

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Poster Title: *Development of an interprofessional medical ethics course*

Poster Type: Descriptive Report

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Purpose: As healthcare becomes increasingly complex, collaboration between disciplines is essential. In 2012, the Battle Creek VA Medical Center (BCVAMC) was awarded an interprofessional training grant for mental health education. Part of the grant required a focus on interprofessional teaching and learning activities. As such, an interprofessional medical ethics course was developed, consisting of pharmacy residents, psychology interns and residents, as well as optometry residents. The structure and content of this course will be reviewed.

Methods: The interprofessional medical ethics course was designed to allow for trainees to explore ethical dilemmas of everyday practice. This would be accomplished by reviewing cases in which ethical problems were encountered in order to examine real word application and complex decision making. The aim has been for trainees to explore these issues with guidance from experienced providers before entering independent practice. Additionally, learners could examine commonalities in practice to enhance interprofessional work throughout their careers. The course consists of ten, 90-minute, monthly sessions. The first session is an explanation of the course, an icebreaker activity and review of course responsibilities. Session two involves a trainee-led review of the principles of medical ethics. During sessions three through ten, participants take turns presenting individual cases encountered in their day-to-day practice, followed by group discussion of the ethical predicament presented.

Results: For the current course series, thirteen trainees and five preceptors participated. Challenges encountered through the experience included varying levels of familiarity with, and interest in, medical ethics, as well as a lack of knowledge regarding each discipline's role in health care. There was also occasional difficulty with trainees clearly communicating and understanding some of the more technical aspects of each of the respective professions. Ultimately, those involved in the course reported benefits in terms of increased awareness of ethical issues along with enhanced appreciation and understanding of other professions.

Conclusion: The interprofessional medical ethics course provided a valuable forum for fostering discussion of healthcare issues between different disciplines. Overall reception from participants, both trainees and preceptors, was positive. Future directions for the course include the development of a pre-post assessment tool, as well as continued emphasis on the role of each discipline in the introductory session.

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Poster Title: *Thunderdome: On-the-Spot Formative Evaluations for Clinical Scenarios*

Poster Type: Descriptive Report

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Purpose: Standardized objective assessments of patient care skills are challenging to develop. Residents often have ample time and resources, during traditional rotations, to collect/analyze data and implement interventions, which doesn't always reflect time sensitive scenarios during practice. After consideration of the Objective Structured Clinical Examinations (OSCEs) used in some PharmD curricula, Henry Ford Hospital residency programs developed a focused clinical skill assessment, called "The Thunderdome". It's designed to provide an on-the-spot assessment of resident's clinical thinking skills with real patient scenarios that increase in difficulty throughout the year. Thunderdome is a standardized way to objectively measure resident's direct patient care skills.

Methods: Thunderdome is completed during orientation and quarterly thereafter. The clinical cases increase in acuity and complexity. Orientation focuses on warfarin and pharmacokinetic cases with residents completing 1 case of each. Quarters 1 and 2 focus on general practice unit (GPU) patients with one or multiple drug-related problems (DRPs), respectively. Quarter 3 involves patients in the intensive care unit (ICU) with multiple DRPs. Residents are presented with a case with 20 minutes to collect and analyze data and present a plan to their Thunderdome preceptor. Residents are paged randomly when a suitable case is identified by pharmacy clinicians. They receive verbal and written formative feedback on objectives 1.13, 1.14, and 1.15 upon completion of the exercise. Passing or failing Thunderdome is based on specific activities linked to ASHP objectives. There is a separate panel of preceptors that review the Thunderdome preceptor evaluations to further ensure standardization of skills and assessments. Failing a Thunderdome case requires the resident to re-enter Thunderdome. Outcomes with road-maps from Thunderdome are incorporated into the resident's training plan and presented at the residency advisory committee (RAC).

Results: All PGY1 residents (n=11) at Henry Ford Hospital participated in Thunderdome the 2015 to 2016 residency year. A total of 5 residents (residents A, B, C, D, and E) failed to pass Thunderdome throughout the year. All residents passed Thunderdome during orientation. During the first quarter, 3 residents failed Thunderdome; resident B due to inappropriate plan (OBJ 1.1.5) and residents A and C due to inadequate patient assessment (OBJ 1.1.4). In quarter 2, residents C and D failed due to inappropriate patient assessment. In the final quarter, residents D and E failed Thunderdome due to inappropriate assessments and plans for their ICU patient cases. All residents passed their Thunderdome cases upon

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retry after plan customization was provided by the preceptor panel. The plan for each resident was customized to incorporate attention to the specific goals and objective which would help them improve clinical skills in the needed areas.

Conclusion: Thunderdome is a standardized approach to ensuring clinical skill development throughout the residency year. It has provided customization to resident training plans specifically in patient assessment and plan development skills. The Thunderdome is also a tool that has helped identify residents struggling with direct patient care skills earlier in the year.

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Poster Title: *Concept mapping as a teaching method to facilitate critical thinking in pharmacists and pharmacy residents*

Poster Type: Descriptive Report

Primary Author: Keng Teng Tan, Tan Tock Seng Hospital;

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Purpose: In Singapore, pharmacists can apply for PGY2 residencies in a specialized area if they have at least 4 years of work experience or after completing a PGY1 residency program. To better prepare pharmacists who are interested in applying for a PGY2 Geriatrics Pharmacy Residency Program, we explored using concept mapping to train and equip pharmacists and pharmacy residents with the necessary critical thinking skills to manage elderly patients.

Methods: Four learners participated in this pilot trial and they include 3 third-year pharmacists (preparing to apply for PGY2 residency in the following 1-2 years) and 1 PGY2 Geriatrics pharmacist resident. The activity of concept mapping is first introduced to the learners and was later applied to various topics such as hypertension, diabetes, hyperlipidemia. For each topic, the learners first drew their own concept maps and later shared their maps with the rest of the group. The session facilitator (a senior pharmacist) then combined the map of the different learners to promote collaborative learning and also to help them identify where the gaps in their thinking lies (from the concepts that they did not think of when they were constructing their concept map). The learners then used the concept map to discuss patient cases that they have prepared. This concept mapping activity was held once a month and one topic was discussed per session. The concept maps were scored using a weighted scoring scale based on the structure of the mind maps.

Results: Learners' concept maps improved with each sessions with more interlinkages developed between concepts, moving from a spoke-like diagram to spoke- and-chains diagram to a net-like diagram. Scores improved for all learners and the more experienced PGY2 resident scored higher than the other learners. This showed that the learners developed an understanding of how to link concepts and the more experienced learner were able to organize her concept map with more concept links not seen in the learners with less experience. Application of the patient cases using the combined concept maps also helped learners to develop a management plan where different concepts are integrated into their plans such as consideration of the functional and social status of the patient and ensuring continued access to the medications recommended.

Feedback from learners were positive as they found the activity fun and useful in their learning and helping them to see the connections between different issues. Learner could also readily use the concept map to apply to their patients that they encountered in their daily work.

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Conclusion: Concept mapping is a useful strategy to facilitate development of critical thinking skills in pharmacy resident and pharmacists. It also helps the teacher or facilitator understand how learners think about or approach a problem and guide them to form important relationships between concepts. Concept maps have been used in other studies in nursing or medical education to assess learner's thinking and reasoning processes. To the author's knowledge, this is the first time concept mapping is described in teaching pharmacists or pharmacy residents.

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Poster Title: *Experience with an evidenced based medicine curriculum in a Post Graduate Year 1 pharmacy residency program*

Poster Type: Descriptive Report

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Purpose: Evidenced based medicine skills are considered an important component of clinical decision-making. Despite the rapidly growing evidence foundation the anecdotal practice of medicine still exists and can emerge in a busy clinical setting. We developed and implemented a longitudinal evidenced based medicine curriculum to equip new pharmacists with the essential toolkit of evidenced based medicine skills as a foundation for a career of practice excellence.

Methods: Cone Health is a 1000 bed community health system that has conducted an ASHP accredited pharmacy residency program since 1968. In 2007 the residency program director identified the need to refine the program's instruction in the basics of evidenced based medicine. She sent one interested preceptor to Information Mastery: Evidenced Based Medicine seminar with the charge of designing a longitudinal program. Core curriculum components were identified including: statistical methods, decision making process, research methods and design, quality of evidence, pharmaceutical industry representatives, and practical methods to provide evidenced based instruction. In 2008 the curriculum was implemented with a series of 5 interactive seminars during orientation followed by 4 required evidenced based medicine presentations and two follow up seminars. The program is assessed using the validated University of California, San Francisco's Fresno Test for Evidenced Based Medicine administered in the first week of the program and at the end of the year in addition to collecting structured feedback from residents.

Results: Since its launch in 2008 structured feedback on the evidenced based medicine curriculum from residents has been positive. Residents give routine praise to the practical focus of the seminars, especially in the areas of statistical analysis and communicating evidence. Incremental improvements are seen in the pre and post Fresno Test for Evidenced Based Medicine. Improvements are variable based on entering resident competence in evidenced based medicine. The quality of resident presentations after the program's implementation improved significantly. In 2010, the end of the year program structure was changed based on resident feedback to include four additional resident led discussion sessions on core statistical methods applied in various types of study design to reinforce key concepts and help prepare the residents for future board certification exams.

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Conclusion: A longitudinal evidenced based medicine curriculum in a PGY1 pharmacy residency program improves the knowledge and the application of evidenced based medicine principles to pharmacy practice.

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Poster Title: *Physical assessment training for pharmacy residents and fellows: a focus on the cardiovascular exam*

Poster Type: Descriptive Report

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Purpose: The ability to understand and perform components of the physical examination is essential for patient care pharmacists. Residents have varying degrees of training in this area during pharmacy school. An optional focused cardiovascular physical assessment training activity was developed for trainees of a residency and fellowship program offered by a school of pharmacy and major academic medical center.

Methods: A half-day physical assessment activity was developed and offered to residents and fellows enrolled in the training program. This activity was designed by three practicing pharmacists. Two have active ambulatory care practices and routinely perform the physical examination in their clinics; the other is an inpatient practitioner and a lead instructor for the school's patient simulator. Trainees were required to notify the organizers if they planned to attend. Participants were required to review an assigned reading on components of the physical examination prior to the live activity. Participants were assigned a partner(s), and a schedule of activities was provided in advance of the session. Trainees were asked to complete a brief survey and provide feedback to the organizers.

Results: Seven trainees participated in the activity which was held on a Monday from noon to 4 PM. Stethoscopes were provided to those who did not have one. There were four components to the activity. First, the two ambulatory-based practitioners delivered an interactive presentation on components of the physical examination. The focus of this discussion was on vital signs, heart sounds and evaluation of volume status. Second, a patient case scenario was given to the attendees, and the trainees worked with their partner(s) to develop questions and physical examination findings that would be required to identify the patient's underlying medical condition. One of the presenters served as the patient and answered questions posed by the trainees; physical findings were reported when requested. Trainees then rotated through two 30-minute stations. One station involved auscultating heart and lung sounds and examining pedal pulses on the patient simulator. Scenarios were developed in advance of the session. The other station involved practicing the physical examination and completing an online heart sound quiz. This station was moderated by one of the ambulatory care practitioners. Overwhelmingly positive feedback was received, and the participants provided suggestions on enhancing the activity moving forward.

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Conclusion: This activity was relatively easy to develop as the necessary resources were available. Based on feedback, a physical examination training will be integrated into the program's orientation. The activity will be lengthened to seven hours to cover additional physical examination components and increase time with the simulator. This activity can be beneficial to those who will obtain vital signs and conduct the physical exam in their practice. This program can also benefit those who will not regularly perform the physical examination as it can allow trainees to have a better understanding and assess findings reported by others.

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Poster Title: *Preceptor survey results at a PGY1 managed care residency: two year findings*

Poster Type: Descriptive Report

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Purpose: Ongoing preceptor development is an integral part of a residency program. The purpose of this project is to describe preceptor survey results from two annual preceptor surveys administered at an accredited managed care residency site.

Methods: Following accreditation site survey, a preceptor development survey was created by the residency program director. The first survey was distributed on 5/7/2014. The results were collected and compiled on 5/20/2014. The results were then discussed at a preceptor meeting held on 6/3/14, and four preceptor meetings occurred during the following 12 months. At each of these preceptor meetings, preceptor development and relevant topics were discussed. The survey was distributed a second time on 5/12/2015. The results were collected and compiled on 5/19/2015. The survey and results were then discussed at the 6/22/2015 preceptor meeting. Nonparametric statistics were calculated to compare responses on the preceptor surveys between the two data collection points.

Results: The preceptor survey developed for this study has provided valuable insight into how residency preceptors feel about the program and has determined areas that require additional attention. In 2014, 10 preceptors completed the survey and provided a response rate of 91% (10/11). In 2015, 9 preceptors completed the survey and provided a response rate of 75% (9/12). Statistical analysis of the survey results indicated that only “effectively precepting while meeting employment responsibilities” approached a significant difference between the two years. In 2014, 40% of preceptors found it to be the most challenging task. In 2015, 89% of preceptors found it to be the most challenging task. All other survey answers were statistically similar between 2014 and 2015. The majority (89%) of preceptors agree or strongly agree that they are comfortable teaching residents clinical problem solving. This increased from 80% in 2014 to 100% in 2015. Through the quality improvement process, one change to the survey was made the second year. In 2015, a fourth question was asked regarding the perceived benefit of preceptor development topics. In 2015, all respondents indicated that the preceptor development topics were perceived as beneficial (89%) or very beneficial (11%).

Conclusion: Factors that preceptors find challenging include: effectively precepting while meeting employment responsibilities and ensuring residents balance the activities of a rotation with the activities of overlapping rotations. Teaching clinical problem solving and providing residents with verbal feedback are factors that preceptors consistently enjoy with ease. The “effectively precepting while meeting

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employment responsibilities” shift indicates the preceptors found this role more challenging in 2015. This may be attributable to the addition of a second resident in 2015 which resulted in more duties for all preceptors. The preceptor survey and related preceptor development initiatives at preceptor meetings have been well received.

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Poster Title: *Development of resources and tools to promote the role of students as pharmacy department extenders at a large community hospital*

Poster Type: Descriptive Report

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Purpose: To describe our development of improved student programs, while simultaneously extending roles of our pharmacists and providing assistance in meeting department patient care initiatives.

Methods: Offering APPE and IPPE student rotations in a manner which is mutually beneficial to both the institution and students is challenging and difficult to maintain consistently. Historically, students from multiple colleges of pharmacy were oriented by individual preceptors for single rotations and/or non-consecutive multiple rotations. A pharmacy education specialist role was created to provide a more comprehensive and structured oversight of our student programs. Responsibilities of this role included: planning master student schedules, streamlining orientation months, facilitating preceptor recruitment and development, improving communication with colleges of pharmacy, oversight of longitudinal projects and managing day to day student activities. Resources and tools were developed by the pharmacy education specialist to overcome the challenges of training many students from various colleges of pharmacy. Monthly calendars, pre-recorded and live learning modules, and rotation to rotation competency checklists are examples. Training was developed to allow students to participate in various regulatory and medication safety initiatives.

Results: The creation of the pharmacy education specialist role enhanced communication and coordination with the various colleges of pharmacy. This allowed students to complete a minimum block of 4 consecutive rotation months. Student orientation months were reduced to 4 per year and staggered so experienced students were available to help onboard new students. Students completed competency based learning modules during orientation that provided a foundation for remaining rotations. The use of a checklist provided preceptors with documentation of the student's competency to perform patient care tasks. These included IV to PO conversions, renal dosing, antibiotic streamlining, anticoagulation monitoring, medication reconciliation, pain assessment and therapeutic drug monitoring. The block rotation structure allowed students to manage and complete a process improvement project. In addition, students provided assistance in the following areas: medication room inspections, central pharmacy medication bin audits and review of pharmacy related patient care orders. Increased structure of the student based program has led to increased staff acceptance and preceptor satisfaction.

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Conclusion: The role of a pharmacy education specialist allowed for oversight, management and expansion of our programs. A more collaborative and structured approach to our student programs overall resulted in less burden to individual preceptors and a more productive approach to training a large number of students.