

Counselling for Kidney Biopsy and Immunosuppression in Glomerulonephritis Using Simulation

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Dear Editor,

Glomerulonephritis (GN) is a common cause for chronic kidney disease and timely diagnosis and interventions are paramount to retard the progression to end-stage kidney failure. GN education is thus an integral part of training to optimize nephrology care delivery. An international online survey of 109 adult nephrology trainees noted that many respondents did not have access to dedicated GN curricula (77%) and GN clinics (55%) [1], but trainees with greater exposure to dedicated GN clinics and nephropathology didactic sessions scored higher for self-competency in GN diagnosis and treatment. While our institution provides a dedicated GN curriculum and GN Disease Management Clinics to train future nephrologists, improving trainees' skills in counselling for kidney biopsy and immunosuppression can be challenging. Recent observations among 58 nephrology fellows in the United States of America also noted that trainees scored lower in communicating the

need for kidney biopsy than for renal replacement therapy in kidney failure [2].

We thus adapted Prince et al. [2]'s "Breaking Bad News" simulation with an objectively structured clinical examination to teach and assess interpersonal communication and professionalism in counselling on the need for kidney biopsy and immunosuppressants among our trainees. Such simulation or role-play had been shown to improve observer-rated information delivery skills and physician confidence in counselling across training programmes in North America, Europe, and Asia [3]. Due to restrictions on large groups during the coronavirus disease 2019 pandemic, these sessions were conducted online with the trainees, simulated patient, and faculty participating in real-time video conferencing. The simulated patient received information about his/her condition, social circumstances, and concerns to be clarified with the trainee. Trainees were given instructions regarding the objectives for the 30-min encounter ("You

For faculty observing the session:

Mini-CEX for immunosuppression counselling using a Likert rating scale and definitions of critical deficiencies and aspirational behavior for each area evaluated

NA not sufficient time to discuss	1* Critical deficiency	2* Unsatisfactory for level of training	3 Satisfactory for level of training	4 Superior for level of training	5* Aspirational (rarely seen)	Score
1. Explanation of Indications / Contraindications for Immunosuppression (IS) Critical deficiencies: Does not explain why treatment is required and the possible consequences of no IS. Aspirational: Explains prognosis with and without IS therapy. Weighs patient's concerns and priorities in planning treatment goals. Reaches consensus with patient regarding treatment goals including with IS.						
2. Explanation of the Options (including no immunosuppression) and Process Critical deficiencies: Does not list appropriate evidence-based options including no IS. Recommends therapy not backed by evidence. Aspirational: Explains overall treatment plan including pharmacological and non-pharmacological aspects. Describes overall plans for induction and maintenance IS in accordance with disease severity and activity. Recommends IS and explains the process including administration schedule and location. Recommendation is tailored to individual patient based on available evidence for disease profile, considers patient risk profile including comorbidities, presence of prior IS side effects or cumulative IS exposure, history or potential non-adherence to oral therapy and financial ability.						
3. Explanation of Risks of Immunosuppression Critical deficiencies: Does not mention possible risks, including de novo or opportunistic infections. Aspirational: Discusses common side effects of IS drug and considers how these may affect patient based on patient and disease profile, in particular weighing patient's concerns and priorities.						
4. Explanation of Risk Management (including prophylaxis and monitoring) for Immunosuppression Critical deficiencies: Does not discuss any risk modification strategies. Does not discuss any monitoring plan. Aspirational: Explains monitoring plan for disease activity and treatment complications. Describes common gastroprotective and bone protective strategies. Discusses cardiovascular risk screening and monitoring. Explains infection risk management eg avoiding raw food, sick contact and live vaccine. Offers appropriate vaccinations. Engages patient or caregiver in self-monitoring (symptoms, home glucose or blood pressure) and self-management.						
5. Soliciting Questions Critical deficiencies: Does not answer patient questions. Does not ask if the patient has questions or answers in a disrespectful or dismissive way. Aspirational: Solicits patient questions and answers sympathetically without jargon.						
6. Comments *must be included for ratings of 1, 2 and 5						

Fig. 1. Mini-CEx rating form for the simulation session on counselling on need for immunosuppression. Trainees were given a brief clinical summary before the session and instructed to counsel on the need for immunosuppression and explore the understanding and concerns of standardized patient during the 30-min video

conference. Trainees received verbal feedback immediately after the session and their anonymized mini-CEx scores (rated by faculty and peers) and Essential Elements of Communication (GRS-EEC 2005) Scale scores (rated by the standardized patient) the following day. Mini-CEx, mini-Clinical Examination Exercise.

will be counselling a patient who has an indication for kidney biopsy/immunosuppressant, and you will have to discuss why the kidney biopsy/immunosuppressant is required and other relevant information”), followed by the clinical scenario (referral and medical history, examination, and investigation findings). Trainees were assessed by the simulated patient using the Essential Elements of Communication (GRS-EEC 2005) Scale and by the faculty and their peers using a Mini-Clinical Examination Exercise adapted from Prince et al. [2] (Fig. 1).

In addition to their counselling skills, the Mini-Clinical Examination Exercise also evaluated trainees’ medical knowledge of the indications, contraindications, risks, and alternatives for kidney biopsy and immunosuppressants. Timely verbal feedback with the simulated patient and faculty immediately after each encounter further reinforced the learning. We piloted the simulation sessions over 2 days among fifteen nephrology trainees from different hospitals in June 2022. Post-training anonymized online evaluation of the learning experience (Table 1;

Table 1. Teaching evaluation administered as online anonymized survey

Question	Evaluation
Overall, I would rate this experience using simulation as	1. Very poor 2. Poor 3. Fair 4. Good 5. Excellent
Overall, I would rate the learning I experienced in this session as	1. Very poor 2. Poor 3. Fair 4. Good 5. Excellent
Overall, I would rate the facilitator as	1. Very poor 2. Poor 3. Fair 4. Good 5. Excellent
Overall, did the course meet the learning objectives	Yes No
Identify the strengths of the simulation programme	
Identify improvement suggestions of the programme	

adapted from Prince et al. [2] and hosted by <https://quizizz.com/?lng=en>) was positive, with specific mentions that the simulation mirrored real-life situations and the counselling experience was not compromised by the video conferencing medium.

The aforementioned survey had noted that most respondents (84%) expressed interest in a virtual glomerular fellowship [1]. The simulation training described can easily be conducted online as part of such virtual fellowships, given the accelerated familiarity with online classes among both trainers and trainees during the coronavirus disease 2019 pandemic. While certain aspects of counsel-

ling should be adapted to local culture and institutional practice, such formative, objective, and structured clinical examinations to assess trainees' competence in counselling on the need for kidney biopsy and immunosuppressant therapy have the potential to objectively identify knowledge gaps and weaker trainees for remediation and hence improve GN education.

Conflict of Interest Statement

All authors declare no relevant conflict of interest.

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Author Contributions

Cynthia Lim, Irene Mok, and Hui Zhuan Tan conceptualized and designed the study; Cynthia Lim, Irene Mok, and Zhihua Huang collected and analysed data; Cynthia Lim wrote the first draft; and all authors reviewed and approved the final version.

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