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EDITORIAL

Use of infographics to communicate landmark glaucoma trials

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Infographics in clinical research communication

The power of infographics in communicating clinical research more effectively than words alone is becoming more widely acknowledged [1]. Infographics have a pertinent utility in succinctly conveying a lot information. In the context of an overwhelming growing body of medical research and progress in big data, clear messaging is paramount [2]. They have been particularly useful in conveying rapid messaging during the COVID pandemic across the NHS and communicating clinical research. A two-phase within-subject experiment found that participants preferred infographic research summaries to the traditional text-only research abstracts and found that infographics required lower cognitive load and did not worsen subjects' retention of information [3]. The study proposed infographics as an alternative representation of research findings or to accompany traditional text-only abstracts.

A crossover study showed that infographic abstracts were more effective than the title alone in generating research interest, which was measured as the amount of social-media interactions, article downloads, and reads [4]. A growing number of leading journals are leveraging the benefits of infographics in generating researcher and public engagement in clinical research and increasing the accessibility and appeal from a wider and nonspecialist readership [5]. Conversely, a failure to communicate clinical research clearly results in a gap between the research and its translation into clinical practice.

Use of infographics to enable clinicians to incorporate evidence into clinical care

In order to provide patients with evidence-based medicine, ophthalmic clinicians are required to stay up to date with relevant ophthalmic literature. However, there are many factors that impact the incorporation of evidence into ophthalmic care, such as time constraints [6]. It takes skill and planning to make infographics intuitive and engaging for busy clinicians. In terms of layout, content, and formatting, infographics need to be accurate representations of the original article and highlight the key messages. Graph interpretation, numeracy skills, and domain knowledge are factors that could limit the wider reach of clinical research infographics and modifications are required to tailor information to suit the target audience.

Use of infographics in ophthalmic education

Some students are predominantly visual, verbal, or kinesthetic learners or a combination of the three. Infographics make use of multiple cognitive learning modalities. Allan Paivio's Coding Theory describes how people learn best when information is presented in multi-modalities [7], thus enabling the mind to encode information in both modes as well as to build referential links between the two representations. According to the Coding Theory, creating and presenting infographics have profound implications for students to maximize their learning [8, 9]. As a way of developing science communication, visual literacy and critical appraisal skills, pairs of students were asked to create an infographic for a designated landmark study in glaucoma [10] using a modified Cochrane dissemination checklist [11] (Fig. 1). In this and future editions of EYE, we present the infographics produced by UCL MSc in Ophthalmology students.

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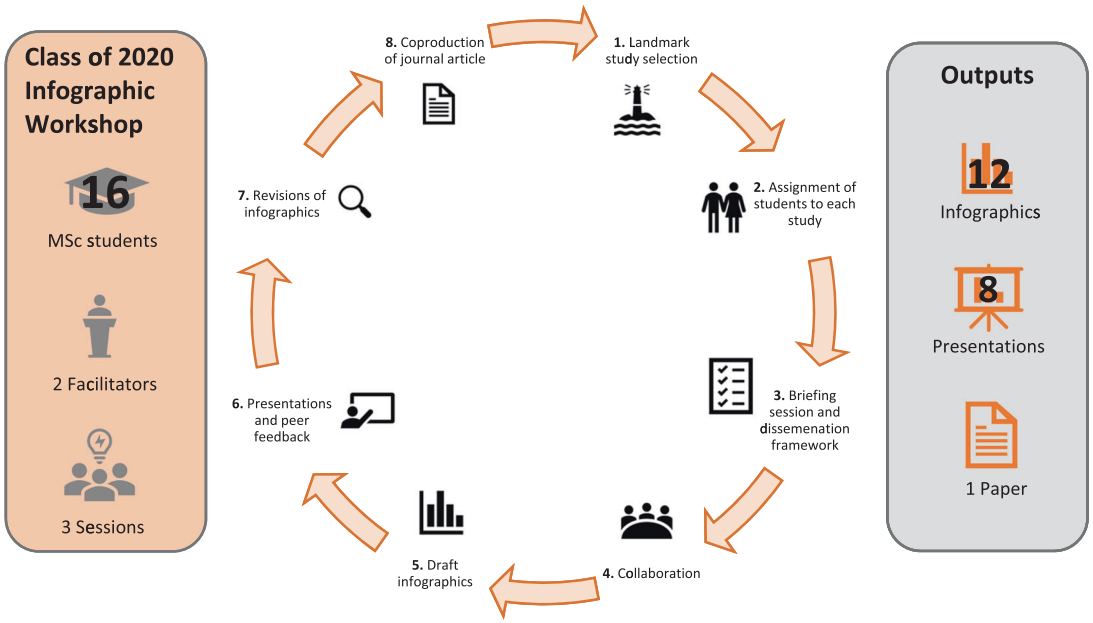

Fig. 1 Summary diagram outlining the 8 steps of the infographics workshop. The workshop was designed using the UCL Connected Curriculum, which is underpinned by student learning through research and enquiry. Step 1: Landmark glaucoma trials were identified from the UCL MSc Core Curriculum. Step 2: Preassigned pairs of students were allocated a landmark study and asked to produce an infographic and presentation. Step 3: As part of the briefing session for the workshop, students were provided with a modified dissemination checklist produced by Cochrane to follow when developing the infographic. The briefing session drew upon prior learning on shared decision making and risk communication. Step 4: Time was set aside to enable diverse groups of students to particpate in collaborative enquiry. Step 5: Students prepared short presentations of the key messages from their infographic to practice verbal science communication. Step 6 and 7: In a larger group setting facilitated by module leads; students peer-reviewed each pair's infographic to make iterative refinements to improve clarity and learn how to provide constructive feedback. Discussions also included how the research findings influenced clinical practice and clinical decision making. Step 8: Further quality assurances were made by module leads for the purposes of journal publication.

Compliance with ethical standards

Conflict of interest Rashmi Mathew is the glaucoma module lead for UCL MSc in Ophthalmology and Programme Co-Director for MSc in Advanced Clinical Practice in Ophthalmology and Advanced Clinical Optomtery and Ophthalmology and Christin Henein is the deputy glaucoma module lead for UCL MSc in Ophthalmology.

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