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A Student-Led Surgical Mentorship Program

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Abstract

Mentorship carries benefits for surgically inclined students: attraction to and retention in surgical training, improved understanding of surgical career pathways, increased research participation and output, and development of surgical skills. With assistance of surgeons and faculty, a surgical mentorship program for medical students was developed and established by the Sydney University Surgical Society, a student organisation of the University of Sydney, Australia. The program was audited at the end of the calendar year with a non-validated survey of participants, informed further by qualitative participant reports and personal observations of convenors. High program satisfaction rates were found for mentee participants, with flexible and informal mentorship interactions characterising the program. Comparatively lower mentor satisfaction rates and qualitative reports suggest that an initial formalised meeting may improve mentor satisfaction and mentee engagement levels. This article describes the evolution and reflects on key features of a novel student-led surgical mentorship program for medical students. It suggests that with faculty support, student-led mentoring initiatives can be established to achieve the desired outcomes of mentoring and provides guidance to assist establishment of similar programs in the future.

I INTRODUCTION

Mentorship carries benefits for surgically inclined students: attraction to and retention in surgical training, improved understanding of surgical career pathways, increased research participation and output, and development of surgical skills (Healy, Cantillon, Malone, & Kerin, 2012).

Surgical mentorship programs have been described, where junior doctors, surgical trainees or consultant surgeons act as mentors to students or junior doctors (mentees) (Healy, Cantillon, Malone, & Kerin, 2012; Ahmed, Nugent, Cahill & Mulsow, 2018). Programs have been tailored to subspecialties or the interests of particular groups, such as women and minorities (Faucett, McCrary, Milinic, Hassanzadeh, Roward, & Neumayer, 2017).

In its inaugural mentoring program, the Sydney University Surgical Society (SUSS) matched 43 students to surgical mentors. The program's strengths are its student-led structure, support from key surgeons and faculty members, and flexibility towards the needs of the six different hospital-based clinical schools within the university.

II PROGRAM ESTABLISHMENT

In response to SUSS consultation with the student body and faculty, the mentoring program was established as follows (Figure 1). First, SUSS developed the base program structure (Figure 2), a mentoring education guide (Figure 3) based on literature review, and goal setting and reflection templates. SUSS identified student participants through an online application process, advertised through private, year group-specific Facebook™ groups of University of Sydney students. 'Key' surgeons and clinical school staff were engaged through pre-existing society relationships, utilising email correspondence and face-to-face meetings. This collaboration was intended to assist adaptation and implementation of the program at each clinical school. As part of its role, SUSS also allocated mentorship pairs at several clinical schools, and oversaw resolution of program problems, acting as first contact and mediator for participants.

Surgeons and clinical school staff helped to adapt the SUSS program for individual clinical school contexts. They also assisted with identifying surgeon mentors and resolving communication issues between participants (Figure 4). At several schools where it was deemed preferable, key surgeons allocated mentorship pairs instead of SUSS. At SUSS' request, clinical schools provided support staff for participants reporting welfare concerns.

Core aims of the SUSS program were the development of students' understanding of mentoring and their ability to engage in meaningful mentoring relationships. Flexibility was otherwise afforded to clinical schools towards program implementation and any additional aims adopted. Clinical school modifications of the SUSS program primarily occurred as non-critical changes to governance arrangements, e.g. mentor pairing and communication roles (Figure 4).

Once allocated to a mentor within their surgical specialty preference, mentees had nine months to engage with their mentor prior to program review (Figure 5). SUSS recommended pairs meet 3 - 4 times over the period to fully engage in and benefit from the mentoring process; however, mentoring pairs were provided freedom to conduct their mentoring relationship as desired. Convenors sent reminder emails to student mentees every two months, encouraging them to organise a meeting with their mentor and review their progress. To assist students, open access, web-based education resources on mentoring and communication were also provided in this correspondence. Additional communication only occurred when the society was contacted by participants, and to collect survey data for program review.

As part of quality improvement, the program was audited with mixed methods data collection via non-validated questionnaires of participants, qualitative participant reports and personal observations of the SUSS executive. Qualitative and quantitative audit data were collected in a concurrent nested format. Quantitative data was sought as primary evidence of program outcome,

with qualitative data providing participant perspective and experience to assist in outcome characterisation. This method was selected due to the novel nature of the SUSS program. Questionnaires were distributed via email to participants in the last month of the program's official duration.

III PROGRAM REVIEW AND DISCUSSION

The SUSS initiative established a student-led surgical mentorship program across the six metropolitan clinical schools of the University of Sydney. Key strengths for the successful implementation of this program were its student-led structure, support from key surgeons and faculty members, and flexibility towards the needs of students and the six different hospital-based clinical schools within the university.

Key aims of the SUSS program were the development of students' understanding of mentoring and their ability to engage in meaningful mentoring relationships. Mentoring was defined as a professional relationship in which a person of experience (mentor) guides the personal and/or professional growth of the mentee. It is the role of the mentee to drive and determine the goals of the mentoring relationship, facilitated by a mentor who seeks to challenge the mentee's ideas and assist them in developing their own solutions, knowledge and/or practice to achieve these aims.

Flexibility in local program design was afforded to clinical schools. In one clinical school a research project was included as a part of the program, whereby mentors also acted as research supervisors. Three students within this clinical school published in peer-reviewed journals within the timeframe of the program. SUSS was initially hesitant to include a formal research component, from concern that this may compromise the society's mentoring aims. However, this additional research was achieved with high program satisfaction rates from these students. These satisfaction rates mirrored the full cohort data.

While approximately half of all audited students were interested in research as part of their mentoring relationships, only students from the research-focussed clinical school reported successfully publishing within the program. While literature reports higher research productivity by participating in mentorship alone (Healy, Cantillon, Malone, & Kerin, 2012), we suggest that planned research projects are a component to consider in mentorship programs seeking to actively develop mentees' research capacity or careers in academic surgery. Such projects may augment existing research components of medical degrees such as the MD Project program of the University of Sydney.

A clear intention of the SUSS program was that mentor pairs also be afforded flexibility in how they conduct meetings and engage with one another. While SUSS provided resources and education for effective mentorship, there were no compulsory directives for how participants were to approach their relationships nor how often they should engage with their mentor. Communication between SUSS and participants was purposefully minimised, with the intention of allowing pairs to explore the mentoring process as 'naturally' as possible.

The flexible format of the SUSS program resulted in mentor pairs commonly meeting informally in operating theatres and public spaces. Many students also engaged in short hallway exchanges, phone calls and emails to address questions that did not necessitate structured face-to-face meetings. Concerningly, we were surprised that a number of students met their mentor only once during the nine months. This was contrary to our expectations that mentorship pairs would meet in private, protected sessions spread across the timeline of the relationship. Nonetheless, this behaviour has been noted in previous international reports of health care mentorship from the United Kingdom (Collins & Oliver, 2017). Anecdotal student reports and personal observations also suggested that many students did not feel it necessary to hold private meetings to address their goals. However, it was reported that the option to have this format available was highly valued by students for more sensitive or personal topics of discussion. This challenged our preconceived idea that mentorship required substantial protected time and primarily private settings to fulfil its roles. Attrition from the program after a single meeting was observed for

students who felt they had achieved their aims and others who felt that their mentor was unable to provide further benefit through future follow up.

While attrition and engagement were concerning, audit showed that the vast majority of mentee participants were satisfied with the program and felt that they had achieved their and the program's core aims. Nevertheless, the engagement level of some mentees (only attending a single meeting) raised the question of whether a mentoring relationship had occurred for a proportion of our students. It is important to note that most scholars agree there is no singular definition of mentoring. Rather, mentoring is characterised by several key elements: a relationship, development, reciprocity, dynamicity, process and activity to achieve the desired outcomes (Woolnough & Fielden, 2017). While time course and intensity of the mentor-mentee relationship is often implied and used to characterise mentoring, in our review of the literature time was not found to be a critical component to achieving benefits. This is exemplified by recent publications exploring the benefits of speed-mentoring, where participants have only ten minutes with each other. Education and wellbeing studies focussing on health care professionals have reported positive professional impacts for both mentor and mentee in this format (Britt, Hildreth, Acker, Mouawad, Mammen & Moalem, 2017; Cellini, Serwint, D'Alessandro, Schulte, & Osman, 2017). We ultimately believe that flexibility of mentor program engagement is a critical factor for mentee success, especially considering the time-poor nature of surgical practice. The findings of the SUSS program support this, suggesting that mentees can obtain high satisfaction rates and benefit from a mentoring program with only a single engagement of their mentor's time.

Conversely, audit revealed that just over half of the mentors were satisfied with their experience. Anecdotally, multiple mentors reported students being unprepared for meetings and not following up. These behaviours have been previously reported as detrimental to mentoring relationships in health care settings (Straus, Johnson, Marquez & Feldman, 2013). Considering this, it was suggested to convenors by mentors that a compulsory initial meeting with goal setting might improve the mentor experience by creating measurable outcomes. The inclusion of this compulsory component may bolster future iterations of the program without compromising student satisfaction and flexibility of engagement. This is supported by reports from students that they would be willing to use goal setting in future mentoring relationships. Prospectively, we suggest that this initial goal setting would also have the potential to increase attended meeting numbers of students. This is supported by Locke and Latham's (2002) well established principles of motivation and goal-setting theory, which are commonly utilised in health education settings.

We believe that successful mentoring requires clear governance, communication and problem escalation pathways. The insight of key supporting surgeons and administration staff were essential to achieve this, and to implement the foundation student-led mentorship program within clinical schools of varying needs. Both groups were instrumental in enlisting the high number of mentors who volunteered, and by providing crucial assistance with communication. As the SUSS program is not part of the medical curriculum and has no funding, there is little recourse when participants stop communicating with SUSS or their allocated partner. We found that poor communication significantly undermined the experience of several participants, particularly for mentors who gave their time to guide the mentee. Supporting surgeons and clinical school administrators were invaluable for establishing effective communication with surgeons and students in these instances.

Through this experience, it has also been suggested that a failed mentoring relationship has the potential to adversely affect a mentee in their future training. The inclusion of clinical school staff and key support surgeons in navigating any difficult aspects of the mentorship program was designed as an essential component of escalation pathways. We found this support motivated pairs to sustain their involvement and suggest that it may allow potential dissolution of mentoring relationships in a manner that protects the reputation of both participants. On reflection, future iterations of the program would benefit from a clearer no-fault opt-out process for mentorship participants.

It is our overall recommendation that any student groups seeking to lead similar mentorship programs should enlist the assistance of faculty and key stakeholders for their support.

IV CONCLUSION

The unique characteristics of the SUSS mentoring program are that it was student-led, flexible, and underpinned by willing support from surgeons and faculty. Reflecting on our experience, characteristics essential for the sustainability of such programs are clear governance arrangements, transparent participant guidelines and problem escalation pathways. Our program findings suggest that a student-led mentorship program can achieve desirable mentoring outcomes and high satisfaction levels of mentees. We better appreciate that a single mentoring meeting can be effective in helping medical students achieve their desired personal and professional goals in surgery. We also feel that goal setting at initial mentor meetings may improve mentor satisfaction levels and overall student engagement. Larger comparative studies are required to further establish the effects of differing mentor engagement levels by mentee participants.

A revised form of the SUSS program is currently ongoing, with planned expansion into rural clinical schools in the future.

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TABLES AND FIGURES

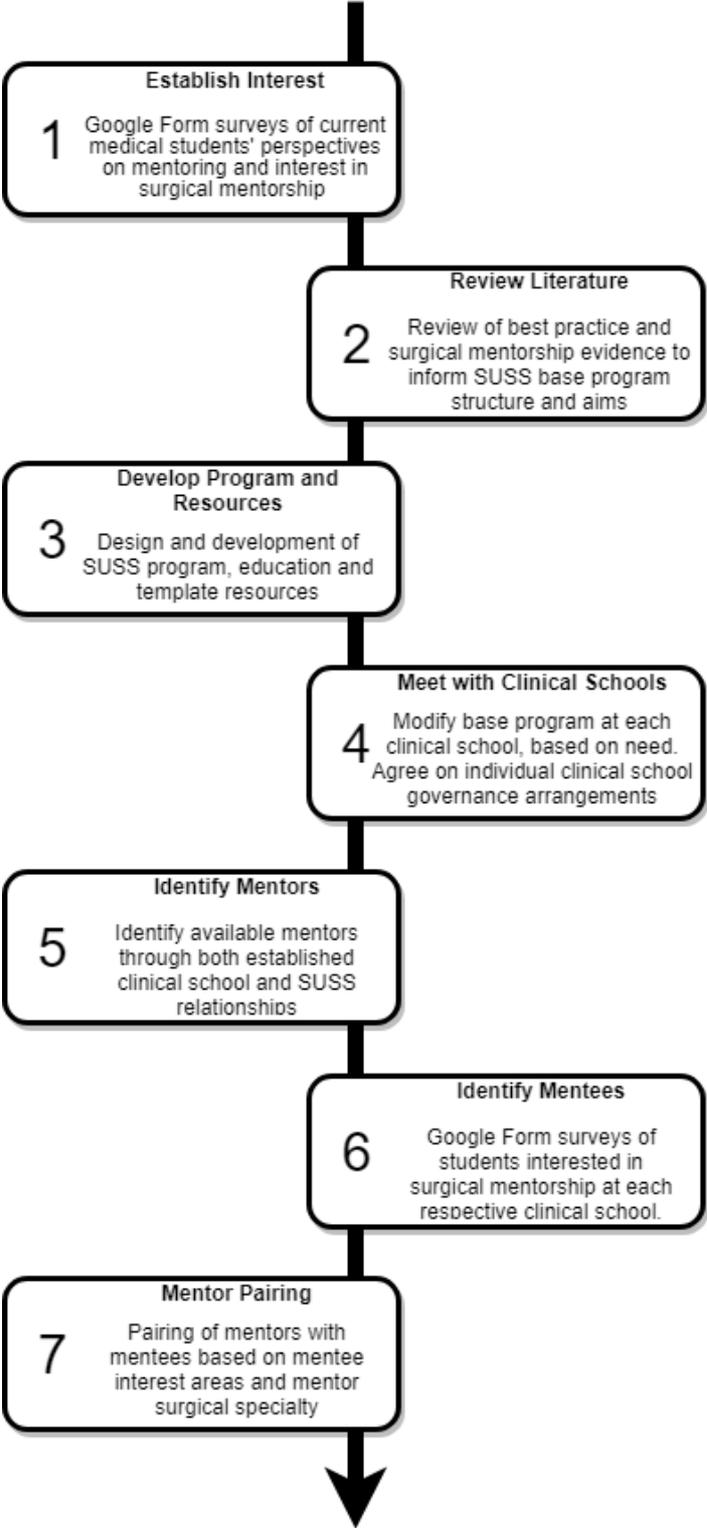


Figure 1. SUSS Mentoring Program development stages

Aims:

- To educate Sydney Medical School students in the benefits of mentorship for a surgical career;
- To assist Sydney Medical School students in developing skills necessary to engage in meaningful mentoring relationships;
- To foster a culture of peer mentorship and learning within the Sydney Medical School.

Governance:

- SUSS as central governance body responsible for yearly operation and review of the mentoring program at each clinical school
- SUSS to allocate mentors, and act as first contact for problem resolution correspondence.

Mentor pairing:

- Mentees matched with a mentor from a surgical speciality which they are interested in.

Program education:

- All participants provided 20 page SUSS Mentorship Guide.
- Additional open access, web-based education resources on mentoring and communication provided to student participants.

Meetings:

- Mentee to drive mentoring goals and agenda.
- Goal setting and reflection templates provided as optional tools.
- 3-4 meetings encouraged over a 9 month period.

Review:

- Participants to participate in end of year review survey as part of program audit

Figure 2. Base structure of the SUSS Mentoring Program, prior to clinical school modification

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Figure 3. Contents of the SUSS Mentorship Guide.

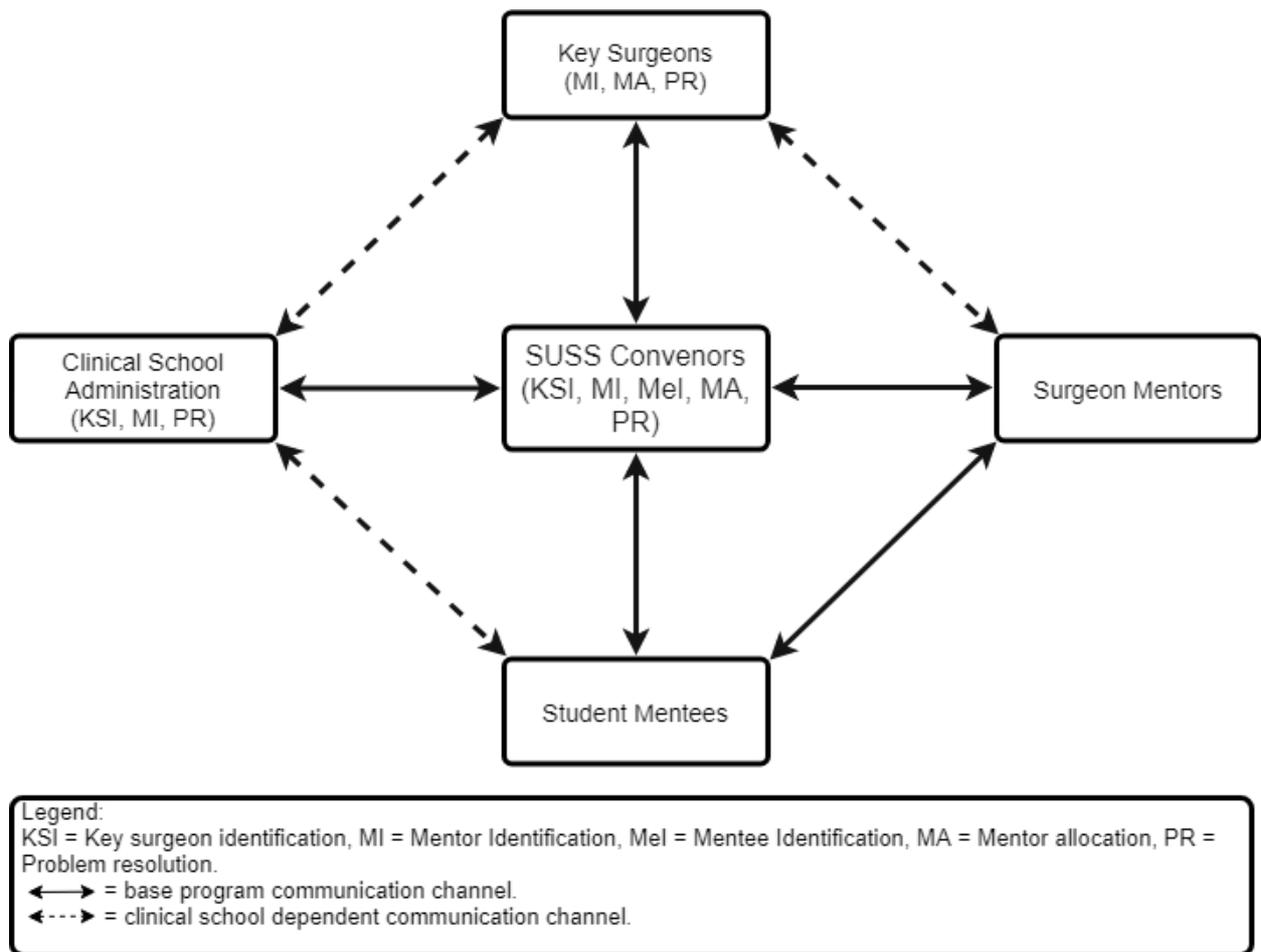


Figure 4. Governance, roles and communication. Base program communication channels were present at each clinical school site. Clinical school dependent communication channels arose subject to the needs and aims of clinical schools for implementation of the individualised mentoring program at that location.

