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**Title:** The reasons for the ebb and flow of career intentions through medical school and pre-vocational training

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**Introduction:** Throughout medical school and pre-vocational training, medical students will be considering future careers and specialty options. In New Zealand, the patterns underlying these career intentions have not yet been investigated. This is an important consideration for the NZ health workforce as there is an expected increased need for GPs, especially in the rural setting. Fortunately, with the genesis of the MSOD (Medical student outcomes database), this has now been made feasible.

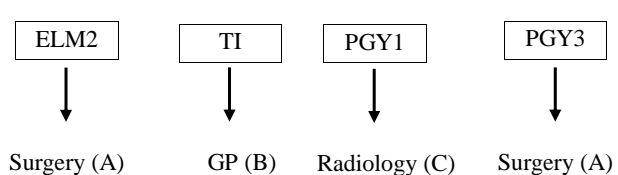
**Aim:** Our main aim was to first quantify any career intention changes through medical school and in the early postgraduate years. Our secondary aim was to assess any associations with, or reasons behind, the changes.

**Impact:** This project may provide benefit for those in curriculum planning and workforce development. Additionally, it may indicate what factors are most influential for malleable students.

**Method:** The project utilised the MSOD which has collected data on New Zealand medical students since 2007 across four time points, medical school entry (ELM2/T1), trainee intern (TI/T2), PGY1(T3) and PGY3 (T4). As such there are two Otago cohorts that have provided linked data at all four time points. Tables were then generated based on how career intentions changed across the 4 time points. Next, students were categorised based on the following career permutations (with A, B, C, D representing a different career respectively).

<u>Persister</u>	<u>Undecided</u>	<u>Midchangers</u>	<u>Partial persister</u>	<u>Inkling</u>	<u>Late changer</u>
AAAA ABAA	ABCD	BAAA BCAA	AABA ABBA ABCB ABCA ABCC	ABBC	AAAB

For example: (Partial persister)



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These groups were then analysed with respect to demographics and influencing factors using Excel and SPSS

**Results:** Response rates – of the Otago 2007/08 cohorts there were n=483 medical students at ELM2. Of these, 181 medical students completed surveys at all 4 time points.

Change across time – only 50 (33%) of students had the same career intention at time point 4 (T4/PGY3) compared with time point 1 (T1/ELM2). The career choices least likely to change over that period were GP (21/28 75%), Obstetrics and Gynaecology (5/8 62.5%) and Surgery (15/51 29%).

In contrast, 104 (60%) had the same career intention at T4 as they had at T3. The career choices least likely to change over that period were Obstetrics and Gynaecology (9/11 82%), GP (24/31 77%), Surgery (24/36 67%) and Internal Medicine (21/33 64%).

Likewise, 96 (63%) had the same intention at T3 as they had at T2. The career choices least likely to change over that period were Surgery (23/28 82%), Anaesthesia (6/8 75%), Internal Medicine (12/18 67%) and GP (22/36 61%).

Finally, 41 (30%) had the same intention at T2 as they had at T1. The career choices least likely to change over that period were GP (15/25 60%). In this case, the Surgery preference was more likely to change (14/44 32%).

Emergency Medicine was a volatile career with 13%, 25% and 13% stability at each time interval. As for other careers such as pathology, public health and radiology, it is difficult to determine the meaningfulness of responses given that few students chose these career intentions at each interval (n= <6).

GP and surgery were the most popular career choices at each of the three time intervals making up 14%, 30%, 28% of the responses respectively.

Of the devised categories, 33 (18%) were undecided, 48 (27%) were persisters, 19 (10%) were partial persisters, 54 (30%) were mid changers, 11 (6%) were late changers and 16 (9%) were inklings.

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SPSS Chi squares identified that the distributions of career permutations were not the same across the career choice (P < 0.05). This was seen with persisters in surgery (n = 15 54%), partial persisters in GP (n=10 22%), mid changers in internal medicine (n= 18 62%) and undecided in anaesthetics (n=7 39%).

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The reasons for career permutations were significant for those in the undecided category following post hoc analysis. For the undecided category, specialty experience had more

influence when compared to partial persisters; further the influence of working hours had more influence for undecided compared to persisters ( $P < 0.05$ ).

**Conclusion:** The period of most change was during the T1 to T2 time interval. In contrast, there was more stability in career intentions from T2 to T4. Surgery, initially is volatile but firms up as a stable career post medical school. GP was consistently popular across all 3 time intervals. Internal Medicine, Obstetrics and Gynaecology also appeared as more popular during the post medical school time intervals. Surgery was associated with persisters, with GP being associated with partial persisters – suggesting reasonable stability in these careers.