
GENERAL MEDICAL COUNCIL ELECTIONS 1984

A representative General Medical Council—how the single transferable vote system can help

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Next July all doctors on the Medical Register will have their chance to elect 50 members to the General Medical Council for a five year term. Both the College and the General Medical Services Committee believe that this time a larger number of general practitioners should be elected in order that the views of our section of the profession should be heard clearly in the GMC.

AT the last election in 1979, only 13 general practitioners were successful. There was a very low level of voting—only a third of the electorate in England voted—perhaps because would-be-voters were inhibited from making their choice by the apparent complexities of the single transferable vote system (STV) used in the election.

In fact, STV is simple: the secret is to vote only for those candidates whom you support wholeheartedly. This is the essential point to bear in mind while marking your paper, and it is demonstrated in the following account of the principles and operation of STV.

Why use STV?

The advantages of STV—that nearly every vote is made to count and that in a multimember constituency the elected group reflects accurately the shades of opinion of the voters—have been widely recognized and acted on. For example, the General Dental Council, the General Synod of the Church of England, several trades unions and national parliaments use STV for their elections.

As the results of a first-past-the-post multimember constituency election are declared, most electors experience disappointment at the composition of the newly elected body. Frustration succeeds disappointment as the voter realizes that he could have cast his votes more effectively if only he had known that some of his preferred candidates would secure landslide victories and that others would stand no chance of success. Instead of wasting votes on these candidates whose success or failure was already assured, the elector could have used his votes to improve the chances of some nearly successful candidates whom he would have preferred over some that were elected. STV was designed to achieve for each voter such an effective use of his vote without the need for guesswork about the amount of support each candidate will attract.

Hints to the STV voter

1. Read the ballot paper carefully and decide which of the candidates you wish to see elected.
2. Ignore the candidates you do not actively support—even a low preference vote for one of them may affect the outcome of the election.
3. Number in order of preference those candidates you actively support. Remember that voting for one candidate only will *not* invalidate your paper.
4. When you have given the preference number to the last of the people you wish to be elected—STOP.

How does it work?

STV works by the voter instructing the tellers to allocate his vote according to the strength of support for each candidate. This apparently sophisticated result is attained by the simple method of listing the voter's chosen candidates, and only those candidates, in order of preference. This indicates to those counting the votes that the elector wishes to cast his vote for the candidate he has marked '1' on his paper, but that if it cannot help that candidate, either because he has enough votes already to secure election or because there is no hope of his election, then the elector wishes to cast his vote for the candidate marked '2', and so on until his vote has been allocated.

The voter gives no preference to any candidate he does not actively wish to be elected, in case a share of his vote should be given to such a candidate. Use is likely to be made of preferences in the middle and lower sections of a voter's list, so that even low preferences must be for candidates that the voter supports wholeheartedly and without reservation.

The counting procedure

The Quota. The count is based on the quota or minimum number of votes that is required to guarantee a candidate's election. The size of the quota depends on the number of seats to be filled and the total number of votes that have been cast. Thus, in a four member constituency the quota will be just over one fifth of the total votes cast; in a five member constituency just over a sixth of the votes cast and so on. In a six member constituency the quota will be just over one seventh of the votes cast; if 70 votes are cast then the quota to ensure election will be $\frac{70}{6} + 1$ votes, that is 11 votes.

The counting procedure is best considered in three stages:

First Stage. The voting papers are sorted into first preferences, then counted and the candidates who have reached the quota at this stage are declared elected.

Second Stage. This involves the transfer of surplus votes from the candidates who have already been elected. The proportion of surplus votes for each candidate is calculated, for example a candidate with 300 votes who needed a quota of only 200 to be elected has a surplus of 100—he does not need one third of his votes. During the second stage of the election all his 300 voting papers are sorted again and a third of a vote is transferred to the next available preference on each of his papers. This process is repeated for each candidate who is successfully elected at the first and second stages until all surplus votes have been re-allocated. Any candidates who reach the quota during this stage of the

count are declared elected.

Third Stage. When there are no more preferences still to be distributed from successful candidates, and not all the election places have been filled, then the next stage is to eliminate the candidate with the fewest votes and to transfer all his votes to the next available preferences of those who voted for him. If after this all the vacancies have not been filled, the candidate with the next fewest votes is eliminated and his votes are re-allocated in the same way.

This process is repeated until a sufficient number of candidates to fill the vacancies on the body to be elected has achieved the quota number of votes, or until only enough candidates are left to fill these vacancies.

These principles are illustrated in the following account of a mock Faculty Board election.

Illustrative Faculty Board election

Let us imagine that the election was to a five member Faculty Board and that there were seven candidates. The total number of votes cast was 539 so that the quota number of votes to secure election was 91 votes (calculated as follows: $\frac{539}{5} + 1 = 90.8$).

Table 1 shows the number of first preference votes, so that Drs Castile and Scott were declared elected after the first stage of the count.

Table 1. Illustrative STV election—count after first stage.

Robert Bruce	86
Eleanor Castile	152 (elected)
Owen Glyndwr	63
George Hanover	31
William Norman	37
Mary Scott	122 (elected)
Henry York	48
Total Votes	539

Quota = $\frac{539}{5} + 1 = 91$ votes

During the second stage Dr Castile's and Dr Scott's surplus votes were redistributed. Dr Castile had 61 surplus votes so that $\frac{61}{152}$ of a vote was allocated to the next available preference on each of her ballot papers. Similarly $\frac{31}{122}$ of a vote was allocated to each of the second preferences on Mary Scott's ballot papers.

During such redistribution, Robert Bruce acquired surplus votes and they were distributed yet again, until at the end of stage 2 both he and Owen Glyndwr had been elected (Table 2).

Table 2. Illustrative STV election—count after second stage.

	Stage 1	Stage 2
		Redistributed votes
Robert Bruce	86	+ 5 = 91 (elected)
Eleanor Castile	152	- 61 = 91 (elected)
Owen Glyndwr	63	+ 28 = 91 (elected)
George Hanover	31	+ 30 = 61
William Norman	37	+ 21 = 58
Mary Scott	122	- 31 = 91 (elected)
Henry York	48	+ 8 = 56
Total Votes	539	539

At this stage there still remained one place to fill, so the tellers proceeded to the third stage of the count.

At the third stage Henry York had the least number of votes so that he was eliminated from the election and his votes were redistributed between George Hanover and William Norman. After this had been done George Hanover reached the quota number of votes and he was declared elected. (Table 3).

Table 3. Illustrative STV election—count after third stage.

	Stage 1	Stage 2	Stage 3
			Redistributed Votes
Robert Bruce	86	91	91 (elected)
Eleanor Castile	152	91	91 (elected)
Owen Glyndwr	63	91	91 (elected)
George Hanover	31	61	+ 30 = 91 (elected)
William Norman	37	58	+ 26 = 84
Mary Scott	122	91	91 (elected)
Henry York	48	56	- 56 = 0
Total Votes	539	539	539

The successful candidates were Drs Bruce, Castile, Glyndwr, Hanover and Scott.

What does the voter have to do?



Cartoon: Professor David Metcalfe

The voter is presented with a list of the names of all the candidates. He simply has to decide which of the candidates he *definitely* wants to be elected and numbers their names in his order of preference. If only one candidate seems deserving of support, the voter may vote for that candidate only, by writing '1' against his name and leaving all the other names unmarked.

It would be a mistake for the voter to mark even a low preference for a candidate he is not certain he wishes to be elected. This is because the voter's higher preference may well not use up his vote and at least some of the vote would then be transferred to the less favoured candidate. No preference should be given to any candidate unless he has the voter's wholehearted support.

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Further details about this system of voting can be obtained from the Electoral Reform Society, 6 Chancel Street, London SE1 0UX.