

Myeloma: Not just bones at risk of fracture – assessing the increasing demand on services

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Background

- Myeloma management has seen significant changes in the last 5 years.
- For decades the diagnosis of multiple myeloma required the presence of end organ damage known as the CRAB criteria.
- In 2014, the International Myeloma Working Group (IMWG) updated the criteria for treatment initiation to include Myeloma Defining Events (MDE)¹.
- The updated criteria allows for treatment of patients who are at such high risk of progression to symptomatic disease that it is clear they would benefit from therapy if they were treated before organ damage occurred.
- In addition, NICE has approved several new therapies over this time period. Some of these for example Daratumumab are continued until progression.
- We assessed the impact of these changes on the myeloma clinic workload in a District General Hospital.

New IMWG Criteria for MM diagnosis

Clonal bone marrow plasma cells $\geq 10\%$ or biopsy-proven bony or extra medullary plasmacytoma PLUS a myeloma defining event:

One or more biomarkers of malignancy:

- Clonal bone marrow plasma cells $\geq 60\%$
- Involved:uninvolved sFLC ratio $\geq 100^*$
- >1 focal lesion on MRI studies

*Involved free light chain concentration must be $\geq 100\text{mg/L}$

OR

Evidence of end-organ damage that can be attributed to the underlying plasma cell proliferative disorder:

- Hypercalcaemia
- Renal insufficiency
- Anaemia
- Bone lesions

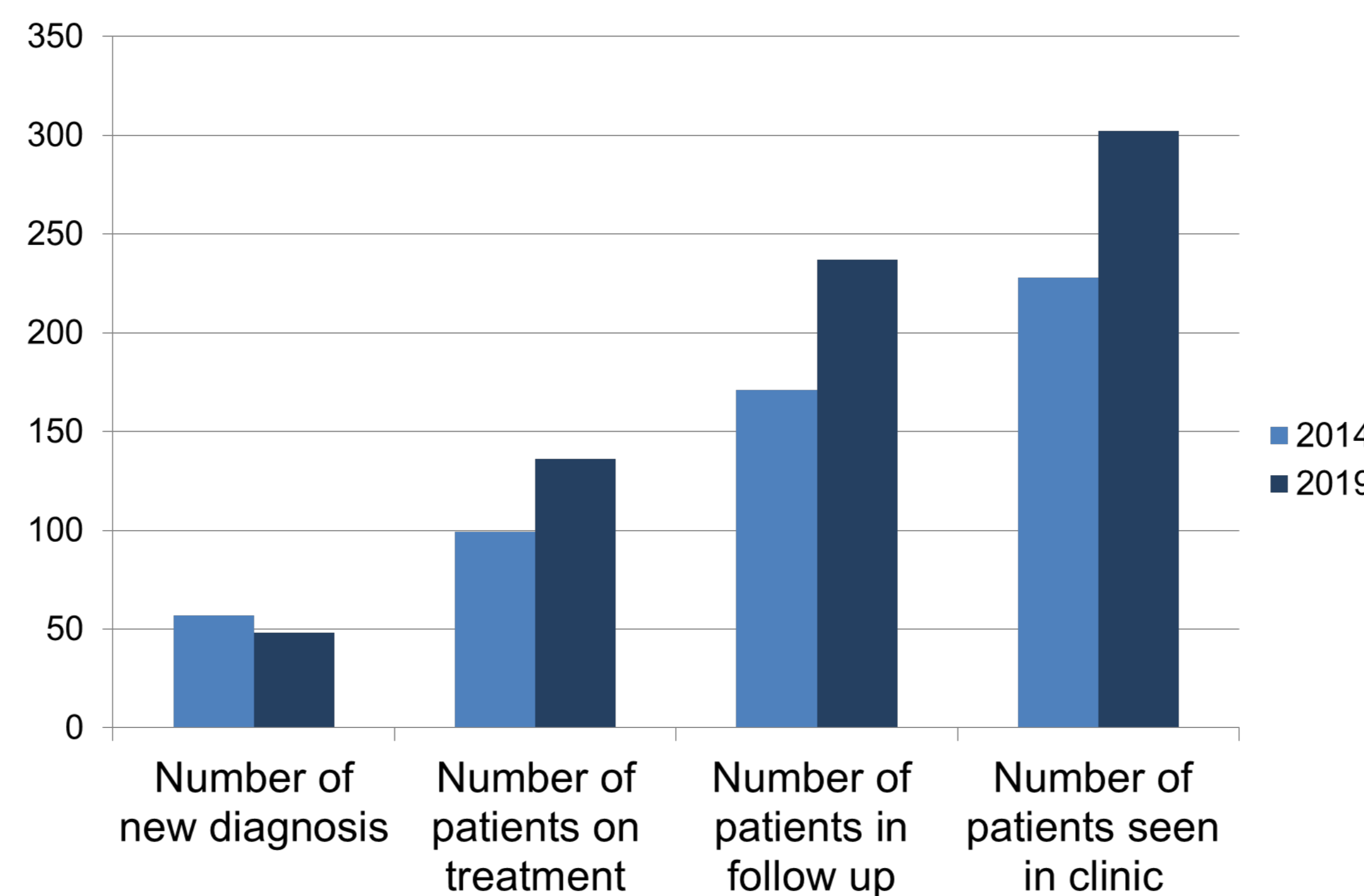
CRAB features

Methods

- Retrospective analysis of myeloma clinic date from 2014 (prior to IMWG changes) and 2019.
- Data collected from electronic patient notes at these time points.
- Patients with MGUS and solitary plasmacytoma excluded.
- Date was analysed for age, diagnosis date, symptomatic vs asymptomatic disease, indication for first line treatment, number of treatment lines received and number of clinic attendances.

Results

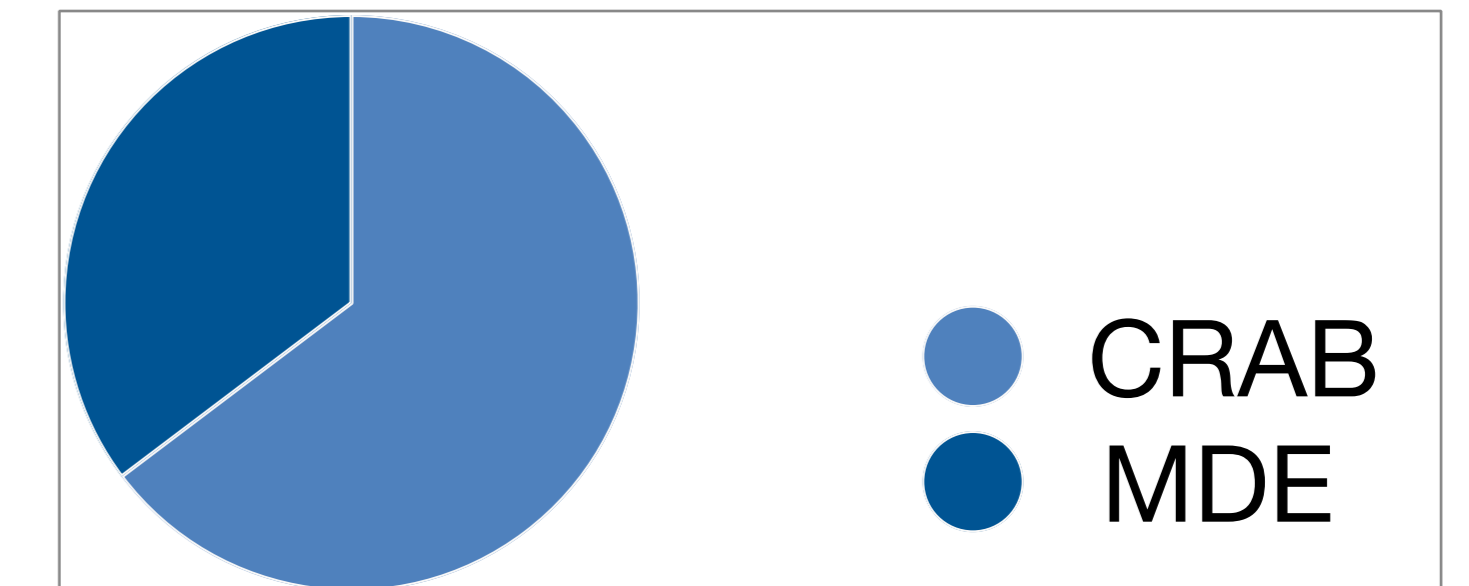
Across two time points 2014 and 2019 we collected data from 405 patients and 2733 clinic visits.



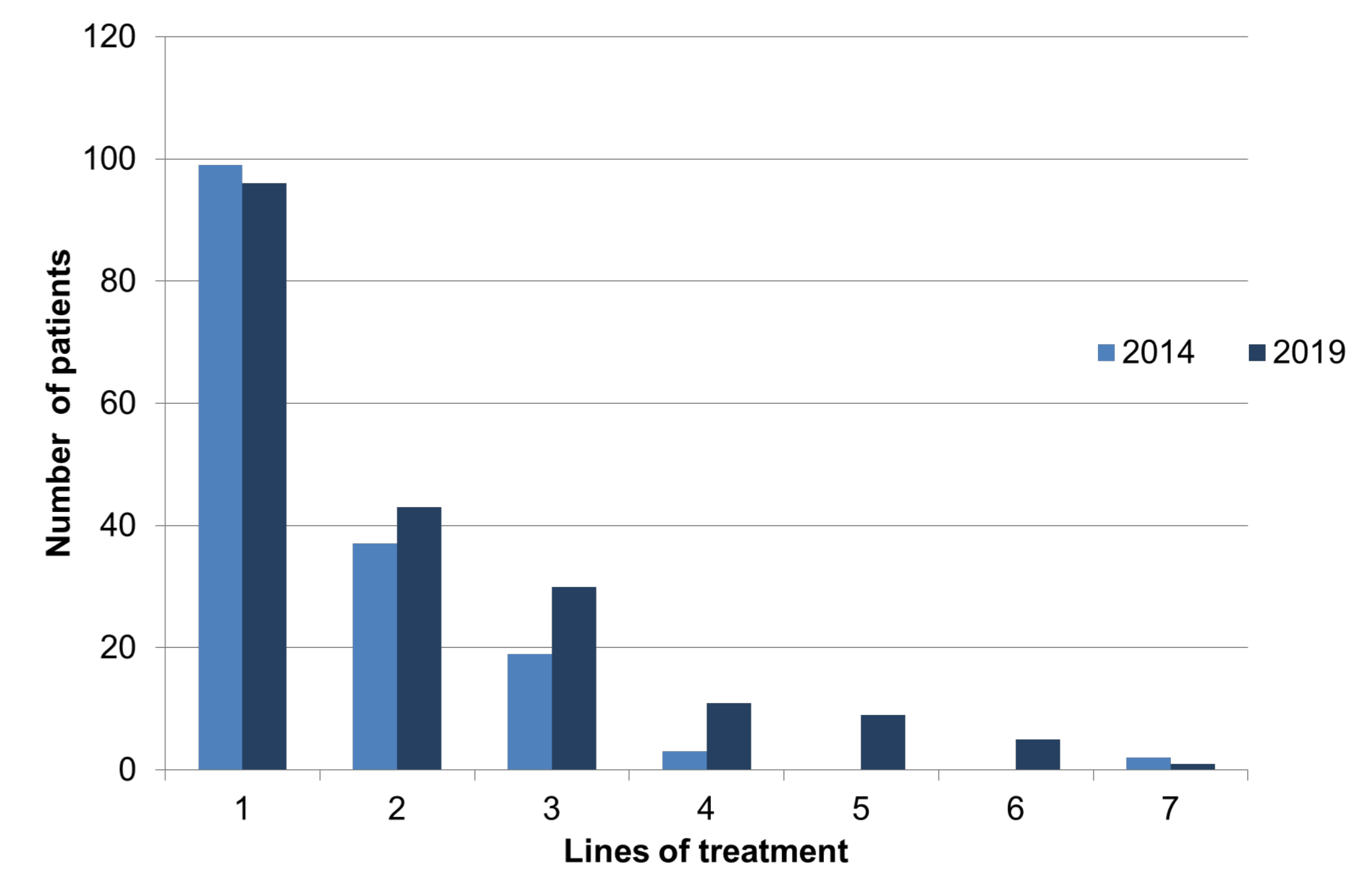
There was a marked increase in the number of patients seen in clinic, under follow up and on treatment although there were fewer number of new diagnoses

- Total number of patients seen increased by 32% to 302 in 2019 compared to 228 in 2014.
- This reflects the increased number of patients in follow up: 237 in 2019 compared to 171 in 2014.
- Consequently, there was a marked increase of 57% in total clinic visits (1663 in 2019 vs 1070 in 2014).
- Patients on treatment were seen 1104 times compared to 696 in 2014, a 59% increase.

There was a 16% increase in the number of patients on treatment in 2019 compared to 2014 (136 vs 99 respectively)



- 32% of patients were initiated for MDEs, reflecting an additional 48 patients undergoing treatment.



There was an increase in the number of patients on treatment and more patients were on 3rd line treatment or above

- The number of patients on 3rd line treatment or above increased by 95% by 2019 (57 compared to 24).
- 32 patients (11%) treated in 2019 received Daratumumab either as 2nd line combination therapy or 4th line monotherapy reflecting an additional day unit burden.

Discussion

- Overall, there has been a significant increase in patient numbers receiving myeloma care, with a significantly increased demand on outpatient and day unit services, pharmacy demands and drug budgets.
- This increase is likely to reflect patients receiving additional lines of treatment and living longer.
- We have to anticipate that these numbers will only increase further, putting further strain on already strained services.
- There has to be a national strategy to aid appropriate provision of care going forwards.

References

1. Lancet Oncol. 2014 Nov;15(12):e538-48. doi: 10.1016/S1470-2045(14)70442-5. Epub 2014 Oct 26