Gloucestershire Safety & Quality Improvement Academy

Gloucestershire Hospitals NHS
NHS Foundation Trust

Improving Nutritional Screening in the chemotherapy outpatient setting

Louise Le Hegarat and Hannah Cook With thanks to: Christine Eaton, Sarah Burrows , Julie McNally, Fiona Brown, Ali Williams

Aim

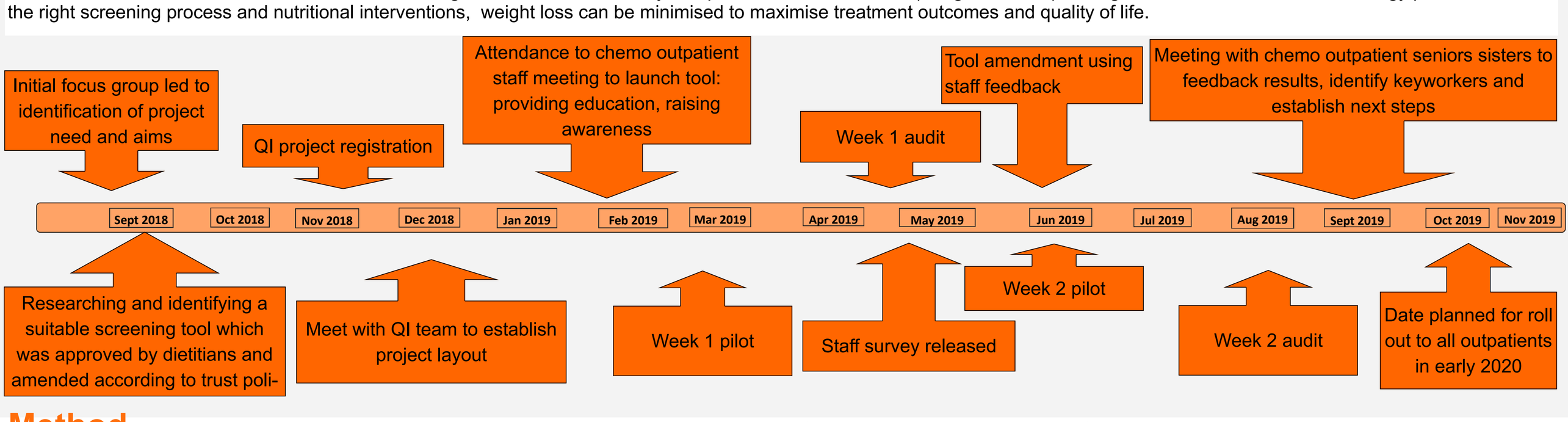
To improve the nutritional screening process for patients in the chemotherapy outpatient setting to allow timely, evidence-based nutritional information to be provided to patients.

This project will also improve the quality of referrals to the Dietetic team and allow safe prioritisation of patients.

Our aim was to ensure 100% of chemotherapy patients in 2 x 1 week trial periods piloted the new nutritional screening tool. Of these patients we hypothesised that 20% of these patients would be rescreened at each chemotherapy cycle.

Background

Within our trust we use the MUST score for inpatients, but there is no efficient method of screening patients receiving outpatient chemotherapy and limited intervention to support nutritional intake. Side effects from chemotherapy such as taste changes, nausea, sickness and changes in bowel habits can cause decreased nutritional intake. When combined with increased nutritional requirements from the tumour growth, weight loss within cancer patients is very common– Shaw et al 2015 found 71% of patients diagnosed with cancer were malnourished. Malnutrition can lead to higher risk of chemo toxicity and poorer clinical outcomes (Kang et al 2018) . Weight loss is not inevitable in oncology patients - with the right screening process and nutritional interventions, weight loss can be minimised to maximise treatment outcomes and quality of life.



Method

All patients who attended the pre chemotherapy sessions during our pilot weeks (excluding head and neck patients) were involved in our screening project. The pilot weeks were chosen randomly and were w/c 1st April and 17th June 2019. Within these 2 weeks the project leaders completed the screening tool for each patient. Chemotherapy nursing staff were also encouraged to participate in completion of tool which contributed to education and engagement with the project.

The trial weeks resulted in 37 oncology patients of varying primary tumours and demographics being nutritionally screened at their first chemotherapy session. These 37 patients had the nutritional screening tool in their chemotherapy notes and outpatient chemotherapy staff were encouraged to rescreen at each of the patient's following chemotherapy appointments.

Any patients classed as moderate risk (see tool) were provided with written advice and any patients deemed high risk were referred to the dietitian.

Patients were also educated on the importance of nutrition and were empowered to monitor their nutritional status throughout their treatment and implement first line nutritional advice to optimise their treatment plan.

2 months after each trial week, project leaders audited the screening tool implementation by tracking patient notes.

Measures

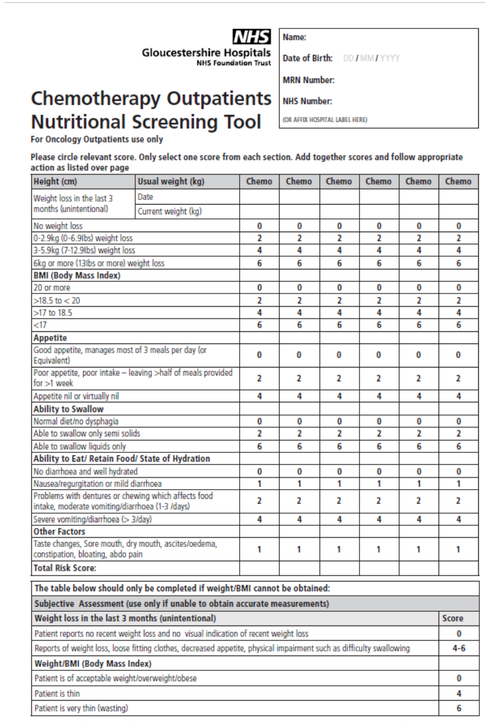
Outcome measure: The number of patients receiving nutritional screening at each of their chemotherapy sessions.

Balancing measures:

-Outpatient staff shortages/ staff turnover = variation in staff engagement

-Lack of resources to be able to implement nutritional screening tool (e.g. staff/ weighing scales)

-Lack of time to complete the screening tool



NHS Gloucestershire Hospitals NHS Foundation Trust

Name:
Date of Birth: DD / MM / YYYY
MRN Number:
NHS Number:
(OR AFFIX HOSPITAL LABEL HERE)

Chemotherapy Outpatients Nutritional Screening Tool

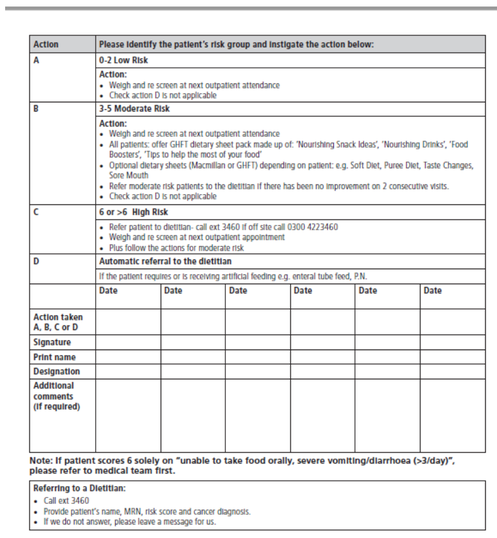
For Oncology Outpatients use only

Please circle relevant score. Only select one score from each section. Add together scores and follow appropriate action as listed over page

Height (cm)	Usual weight (kg)	Chemo	Chemo	Chemo	Chemo	Chemo	Chemo
Weight loss in the last 3 months (unintentional)	Date						
	Current weight (kg)						
No weight loss		0	0	0	0	0	0
0-2.9kg (0-6.9lbs) weight loss		2	2	2	2	2	2
3-5.9kg (7-12.9lbs) weight loss		4	4	4	4	4	4
6kg or more (13lbs or more) weight loss		6	6	6	6	6	6
BMI (Body Mass Index)							
20 or more		0	0	0	0	0	0
>18.5 to < 20		2	2	2	2	2	2
>17 to 18.5		4	4	4	4	4	4
<17		6	6	6	6	6	6
Appetite							
Good appetite, manages most of 3 meals per day (or Equivalent)		0	0	0	0	0	0
Poor appetite, poor intake – leaving >half of meals provided for >1 week		2	2	2	2	2	2
Appetite nil or virtually nil		4	4	4	4	4	4
Ability to Swallow							
Normal diet/no dysphagia		0	0	0	0	0	0
Able to swallow only semi solids		2	2	2	2	2	2
Able to swallow liquids only		6	6	6	6	6	6
Ability to Eat/ Retain Food/ State of Hydration							
No diarrhoea and well hydrated		0	0	0	0	0	0
Nausea/regurgitation or mild diarrhoea		1	1	1	1	1	1
Problems with dentures or chewing which affects food intake, moderate vomiting/diarrhoea (1-3 /days)		2	2	2	2	2	2
Severe vomiting/diarrhoea (> 3/day)		4	4	4	4	4	4
Other Factors							
Taste changes, Sore mouth, dry mouth, ascites/oedema, constipation, bloating, abdo pain		1	1	1	1	1	1
Total Risk Score:							

The table below should only be completed if weight/BMI cannot be obtained:	
Subjective Assessment (use only if unable to obtain accurate measurements)	
Weight loss in the last 3 months (unintentional)	**Score**
Patient reports no recent weight loss and no visual indication of recent weight loss	0
Reports of weight loss, loose fitting clothes, decreased appetite, physical impairment such as difficulty swallowing	4-6
Weight/BMI (Body Mass Index)	
Patient is of acceptable weight/overweight/obese	0
Patient is thin	4
Patient is very thin (wasting)	6

TO BE FILED IN PATIENT'S HEALTH RECORD 1 GINIGIFIY1992/09_19 Review Date: 09_22



Action	Please identify the patient's risk group and instigate the action below:
A	**0-2 Low Risk** **Action:** • Weigh and re screen at next outpatient attendance • Check action D is not applicable
B	**3-5 Moderate Risk** **Action:** • Weigh and re screen at next outpatient attendance • All patients: offer GHFT dietary sheet pack made up of: 'Nourishing Snack Ideas', 'Nourishing Drinks', 'Food Boosters', 'Tips to help the most of your food' • Optional dietary sheets (Macmillan or GHFT) depending on patient: e.g. Soft Diet, Puree Diet, Taste Changes, Sore Mouth • Refer moderate risk patients to the dietitian if there has been no improvement on 2 consecutive visits. • Check action D is not applicable
C	**6 or >6 High Risk** • Refer patient to dietitian- call ext 3460 if off site call 0300 4223460 • Weigh and re screen at next outpatient appointment • Plus follow the actions for moderate risk
D	**Automatic referral to the dietitian** If the patient requires or is receiving artificial feeding e.g. enteral tube feed, P.N.

	Date	Date	Date	Date	Date	Date
Action taken A, B, C or D						
Signature						
Print name						
Designation						
Additional comments (if required)						

Note: If patient scores 6 solely on "unable to take food orally, severe vomiting/diarrhoea (>3/day)", please refer to medical team first.

Referring to a Dietitian:
- Call ext 3460
- Provide patient's name, MRN, risk score and cancer diagnosis.
- If we do not answer, please leave a message for us.

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Using the tools, patient's nutritional score was calculated and actions were implemented accordingly.

In an effort to increase staff awareness and engagement, project leaders:

- Printed out labels to place on the front of patient notes involved in our trial
- Team meeting attendance
- Small group teaching
- Written information provided in staff communication file alongside email communication to all chemo outpatient nursing staff
- Demonstrating tool usage
- Staff survey to receive anonymous feedback on screening tool and potential barriers to completion
- We documented in patient treatment record to prompt rescreen
- Tool filed visibly in professional record section of patient's notes

Results

There was 38.8% compliance with completing the nutritional screening tool in our patient cohort from week 1 and a 21% compliance in our patients from our week 2 trial.

Of the 37 patients screened, 11 patients were screened fully and 18 patients were never rescreened at their future chemotherapy appointments. The remaining 8 patients were only screened at a few of their further chemotherapy sessions. 8 out of 37 patients generated new referrals to dietitians (excluding patients already known to dietetic department) and patients were seen (on average) 7 days after referral. Of the patients not rescreened, there were many who had lost weight and not been referred.

Discussion

Although this may seem that this project has failed in terms of tool completion rates, we proceeded to hold a meeting with the chemotherapy lead sisters to discuss barriers to implementation. The decrease in compliance between the two pilot weeks may have occurred due to lack of availability to provide further education for staff from project leads. An anonymous staff survey was sent to all departmental staff (*n= 35).* Of these, 12 completed it. Feedback for the tool design was largely positive. Potential barriers to completion identified by the staff mainly centred around time constraints/staffing levels.

We have since identified that from October 2019, there will be an increased: staff numbers (due to predicted increase in patient numbers); number of weighing scales; room availability in the chemotherapy outpatient department. A key worker was identified to help influence behaviour change and promote education/awareness of the link between nutritional status and chemotherapy treatment outcomes.

Positive feedback was received from patients during the nutritional screening tool and dietetic intervention was largely beneficial. Ethically, we need to ensure that all patients are nutritionally screened to allow all patients to have equal access to nutritional interventions which may help influence their treatment outcomes.

Summary and next steps

> The nutritional screening tool will be completed for all patients at each chemotherapy session from February 2020.

> Nutritional screening training will begin in January 2020 and will be refreshed every 2 months at department meetings

> A link nurse has been allocated to raise awareness of the tool with staff and patients

> Monthly audits will be completed to assess completion levels

> Ongoing monitoring and documenting of the volume of dietetic referrals generated and time taken to review. It may be that a business case is needed to request additional dietetic staff

> Potential application to other partnership trusts or sites such as Edward Jenner in GRH

References: https://www.ncbi.nlm.nih.gov/m/pubmed/24947056/ (Shaw et al 2015);
https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0195118 (Kang et al 2018)