

# “ It Takes A Team” To Improve Diabetic Care Among Dialysis Population

## Background

Diabetes Mellitus (DM) is one of the most prevalent chronic health problems in Qatar, around 16.7% of adult population above age of twenty years have diabetes mellitus . as a consequence, the incidence of patients with DM developing ESRD has also increased. DM occurs in 55% of patients with ESRD and 2% of patients develop DM after their first year of dialysis. more than 60% of the patient cared for in dialysis facilities have DM. Dialysis facilities are challenged with the care of the steadily increasing number of patients with DM developing ESRD. Our dialysis data systems suggest that the current care of patients with DM on dialysis is suboptimal because of many reasons,30% of diabetic dialysis patients were followed by diabetes care team (diabetologist, educator and dietician) and have their HbA1c monitored regularly (at least 3 times/year), yearly eye examination were performed in less than 25% and less than 8% were assessed by podiatric specialty.

Many published reports have confirmed the importance of implementing a diabetes care program and its significant impact on patient's outcomes.

## Aim

Optimize the diabetic care management in dialysis facilities and improve patient's outcomes for this group of population:

1. Improving diabetes knowledge
2. Optimizing self-management behavior
3. Improving glycemic control
4. Maintain baseline foot care
5. Reducing diabetes-related hospitalization
6. Enhancing quality of life

## Intervention

### Phase 1 (2013-2014)

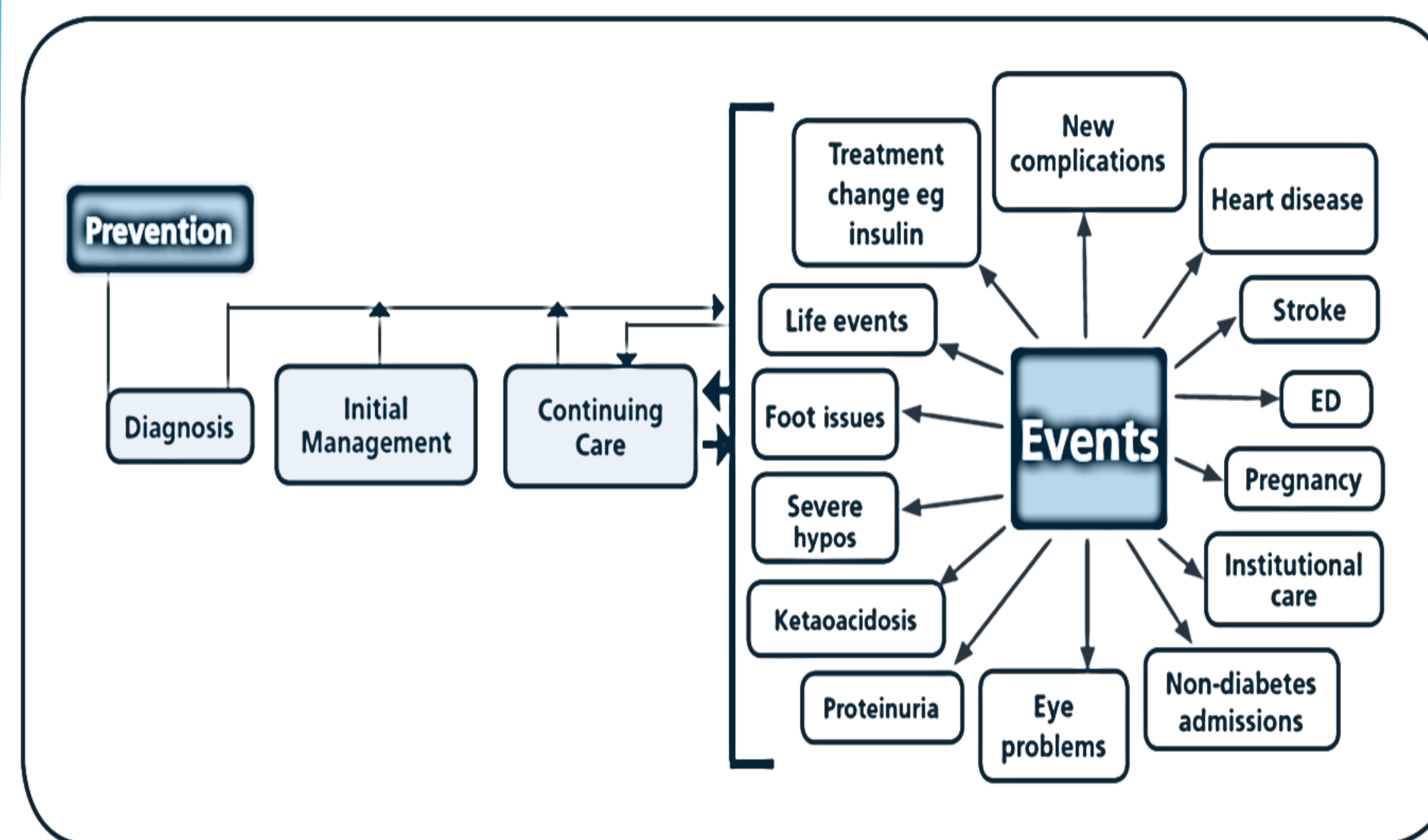
- Data registry for diabetic patients on hemodialysis (HD) in Fahad Bin Jassim kidney center (FBJKC), includes DM history, foot / eye screening and DM complications
- Concerned related specialties approached to provide in-center services .
- HD unit-related clinical diabetes care pathway was developed.
- Dialysis-diabetes nurses were assigned for coordination management care.
- Bedside patient education & dietary consultation for diabetes initiated in organized manner
- By mid of 2014 the in-center diabetic management care initiated in HD unit.

### Phase 2 (2014-2015)

- Expansion of in-center diabetes management care for HD patients
- Initiation of podiatric and wound care service within the dialysis center.
- Data monitoring and tracing to maintain the standards required diabetes care

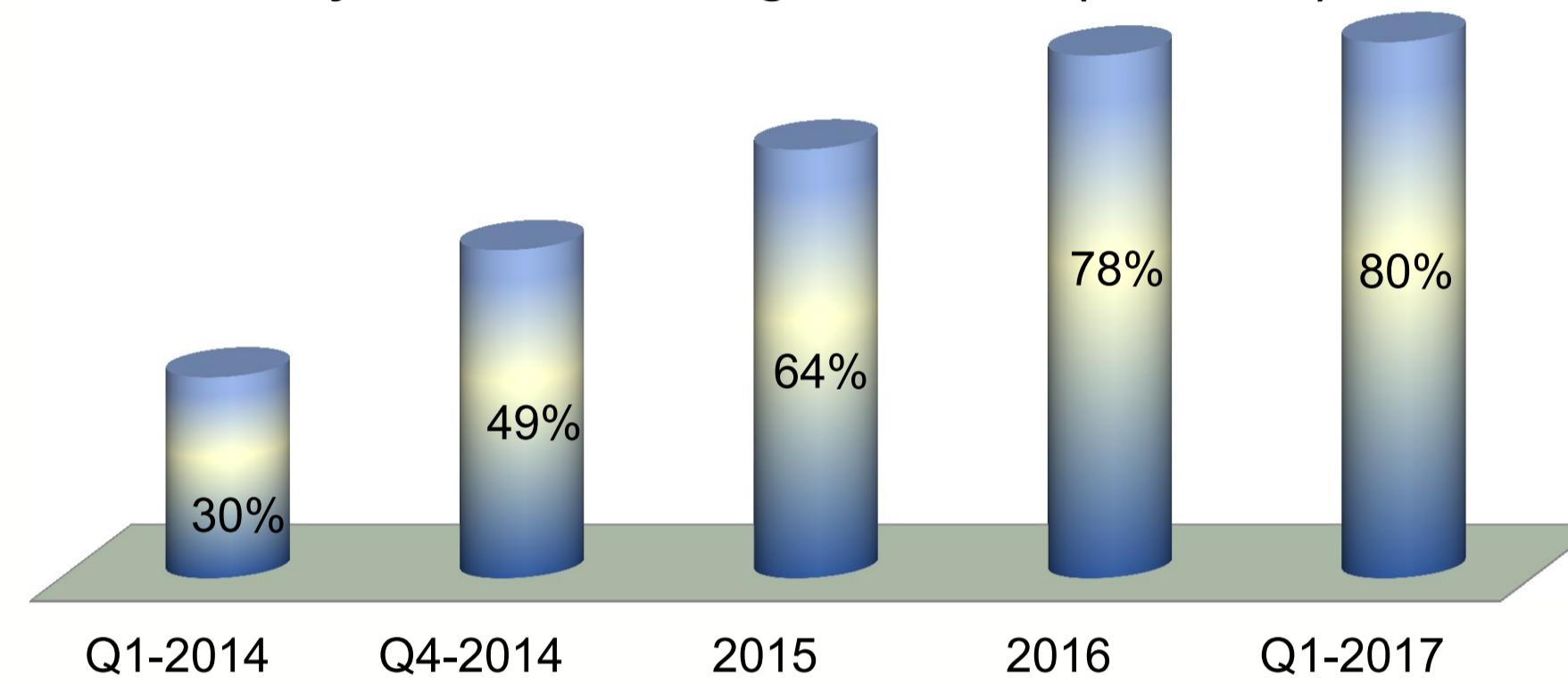
### Phase 3 (2015-2016)

- diabetes high risks group patients data registry was initiated .
- All diabetes dialysis patients had regular access to assigned Dialysis-Diabetes Nurse responsible for providing support in relation to ongoing care of diabetes and its complications
- Home hemodialysis patients were managed by the nephrologist in coordinating with diabetes care team
- Cardiology & ophthalmology specialties were approached to initiate in-dialysis center services

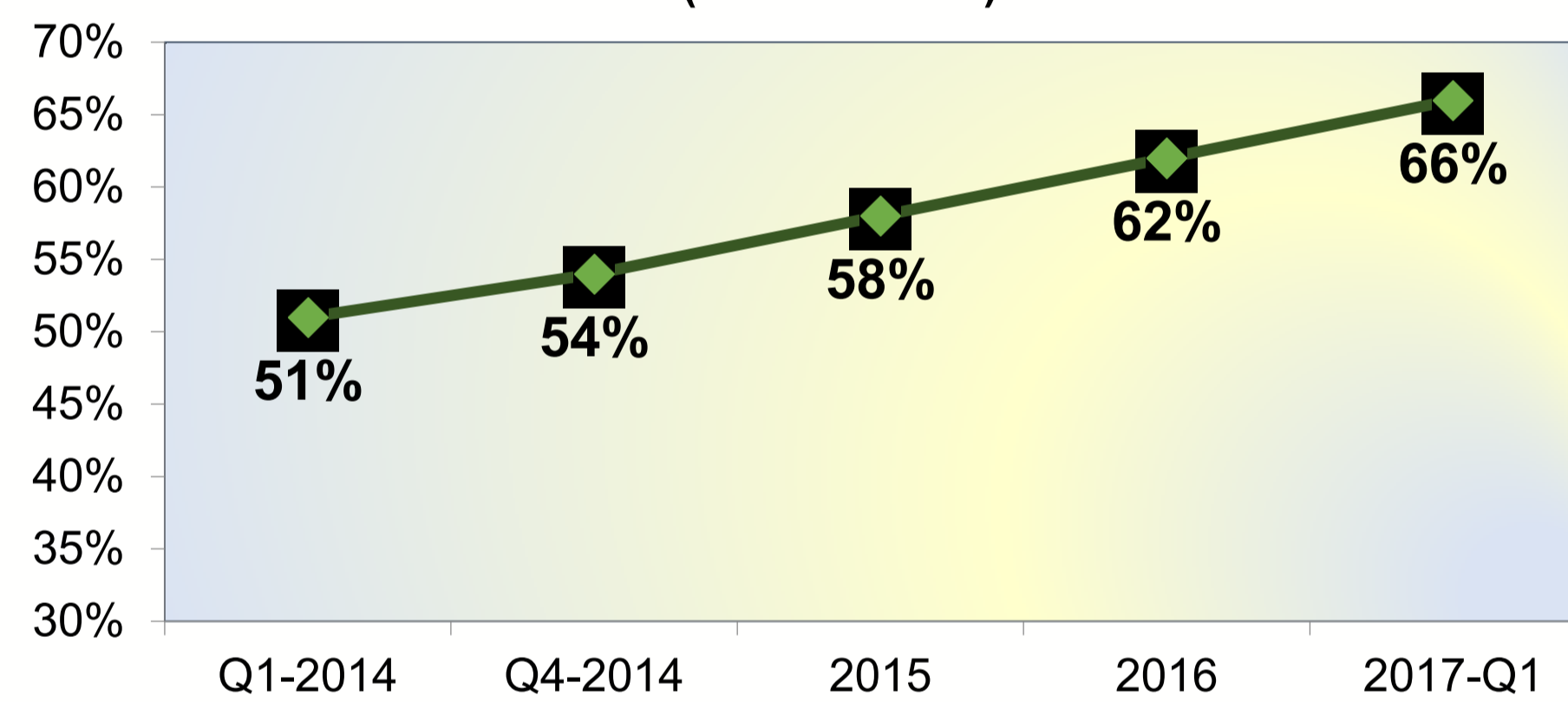


## Results

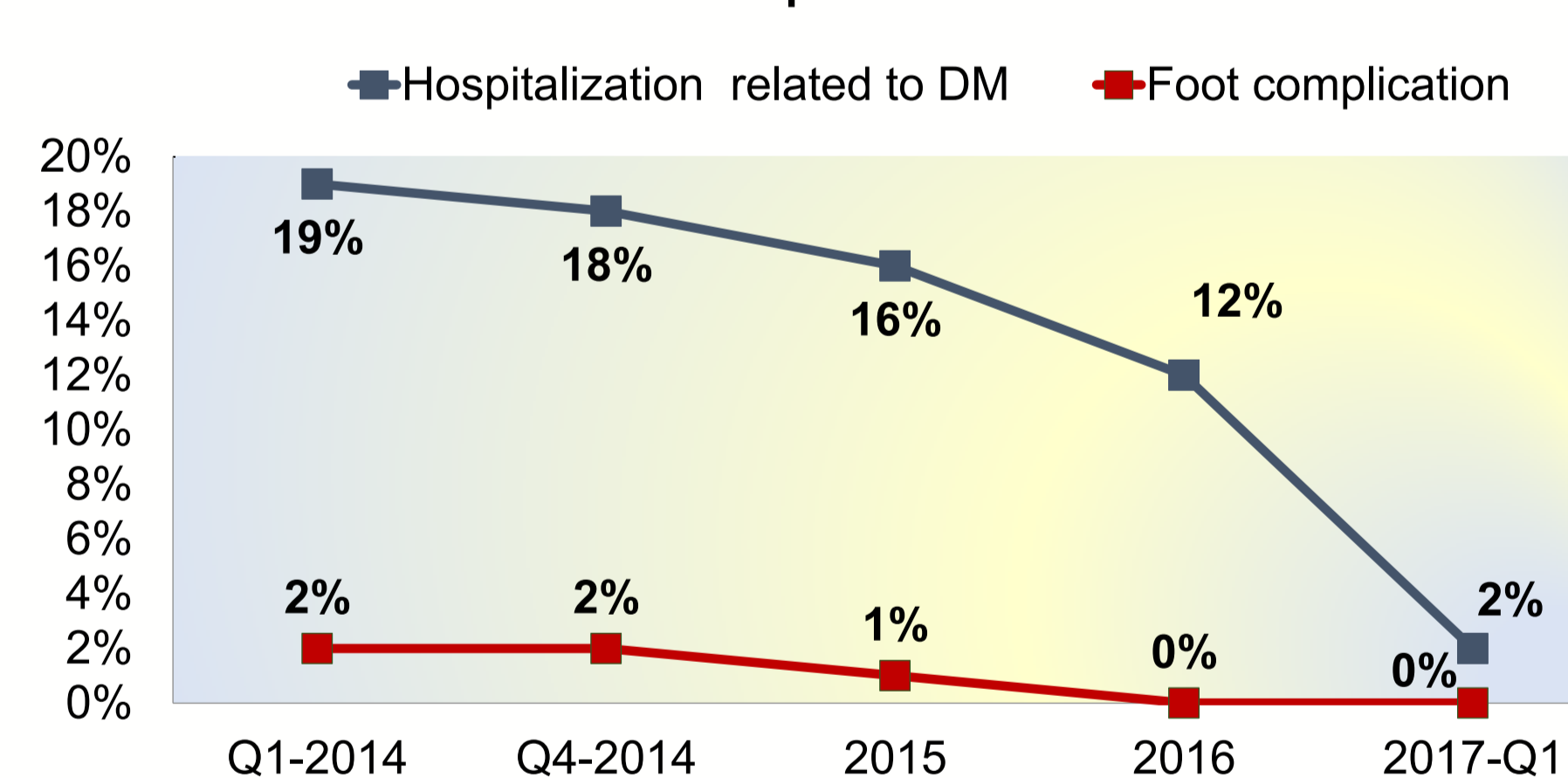
Dialysis-Diabetic Management Care (in FBJ KC)



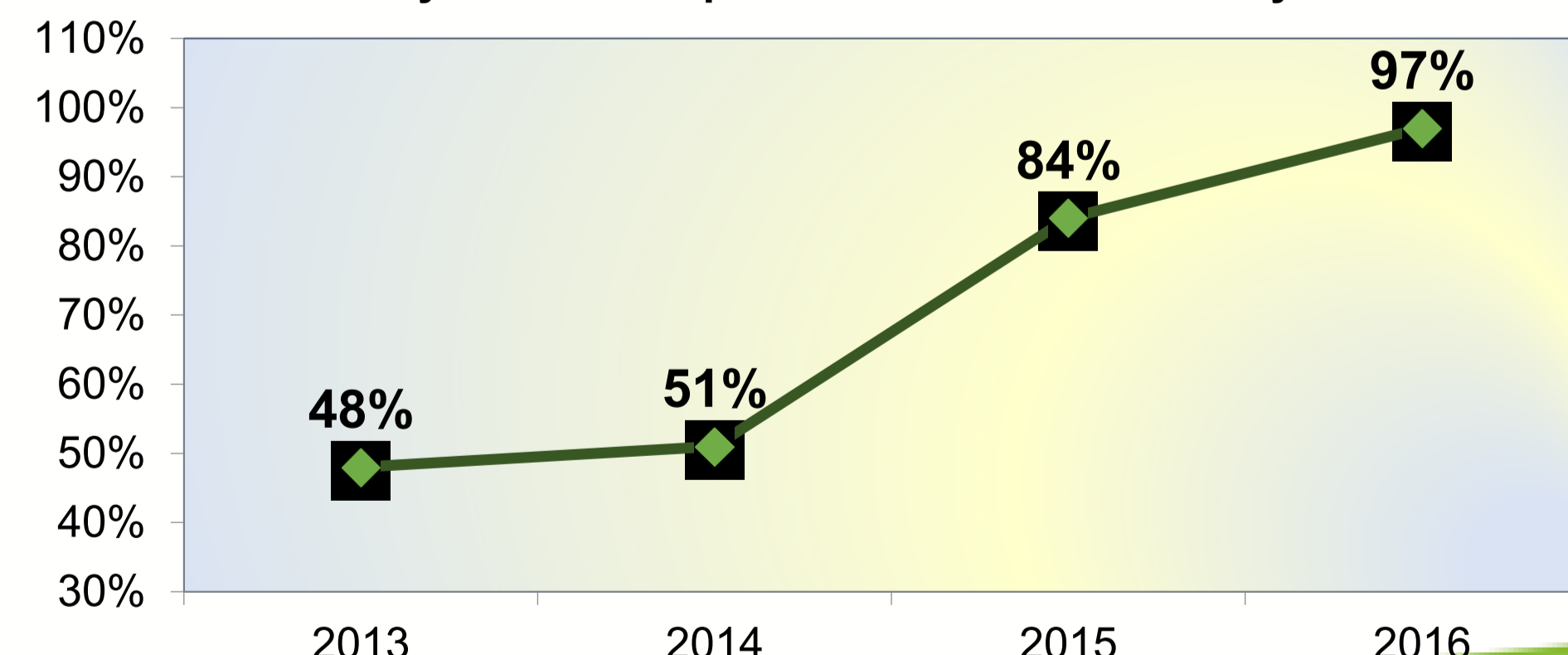
Glycemic Control for Dialysis - Diabetic Patients (HbA1C<7.3%)



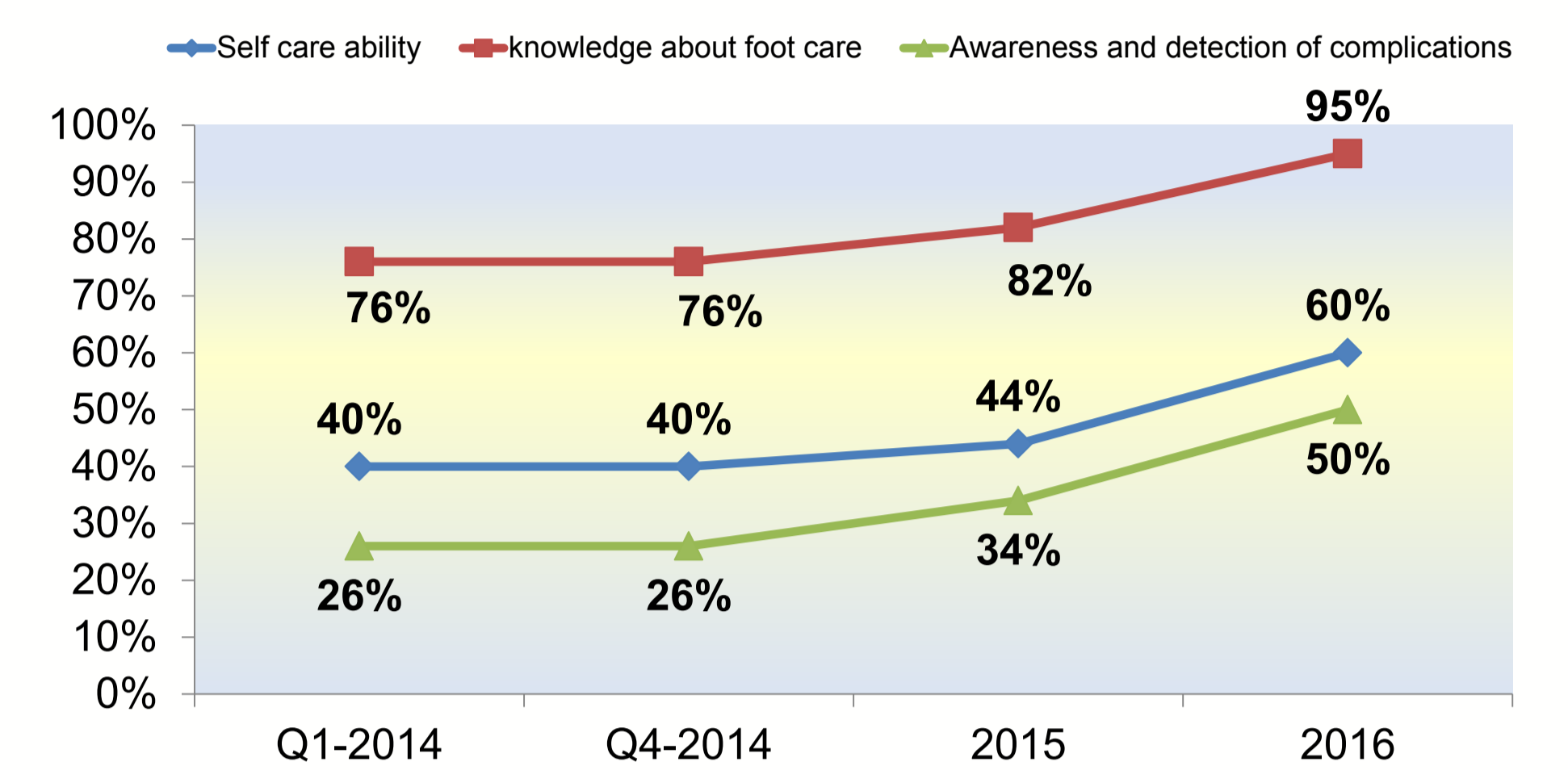
Diabetic related Hospitalization and Diabetic foot complication



Dialysis-Diabetic patients Satisfaction Survey in FBJKC



## Diabetic Patient Self Management Behaviour



## Outcome

- The percentage of patient under the dialysis -diabetic management care exceeded the target by 5%.
- The percentage of dialysis- diabetic patients with HbA1c <7.3% increased from 52% in Q1-2014 to 66% in Q1- 2017
- The patient satisfaction surveys for the diabetic programs have been showing an upward trend for the past 3 years.
- The hospitalization related to diabetes complication decreased from 19% to 2% in march 2017 and the foot complication related to diabetes multitas decreased from 2% in q1-2014 to reach zero in march 2017

## Conclusion

- Through implementing the newly developed diabetes care management model in dialysis unit, we ensured the equal accessibility of such standard care service to all dialysis diabetes patients. Additionally were able to improve most of our goals in related to patient outcomes includes amputation and hospitalization rates producing substantial saving.
- This suggest that systematic and educated care approach to DM and its complications is needed to be developed in the dialysis community.

## Improvement team

### Project Sponsor:

Dr. Fadwa Al Ali ,MD  
Director of HMC Dialysis Services

### Team member :

- Osama Hussein Musa, RN
- Dr. Tarek Ghonimi MD
- Dr Mohamed Amin, MD
- Dr Mohamed Yahya, MD
- Dr Hany Ezzat, MD
- Dr. Saifat Ullah Khan, MD
- Dr. Seleena Farook ,MD
- Sujatha Chakkaravarthy, RN
- Vimala K Lonappan ,RN
- Neama Ahmed, RN
- Sandra Edris, RN

## References

- Management of adults with diabetes in the hemodialysis unit, April 2016 JBDS-IP ,www.diabetologists-abcd.org.uk/JBDS/JBDS.htm
- Seminar in Dialysis – Vol 16 No 3 (May-June) 2003, PP. 197-198
- Bener A, Zirre M, Janahi IM, Al-Hamaq AO, Musallam M, Wareham NJ."Prevalence of diagnosed and undiagnosed diabetes mellitus and its risk factors in a population-based study of Qatar". Diabetes Res Clin Pract. 2009 Apr;84(1):99-106
- Foot care in dialysis addendum for HMC clinical policy (CL 6021 care of adult HD population)

In Collaboration with