Improved Health Outcomes in Patients Receiving Health Case Management (HCM)

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BACKGROUND

- The Great-West Life Assurance Company's (GWL) Health Case Management (HCM) program is designed to assist plan members who have been prescribed certain specialty medications to treat complex or chronic conditions like rheumatoid arthritis or Crohn's disease
- Plan members who have been prescribed certain specialty medications are connected with a health case manager, who is a qualified health care professional, to provide ongoing support and monitoring
- As part of the HCM program, GWL has engaged HealthForward Inc., an industry leader with extensive specialty medication experience and a broad specialty pharmacy and treatment clinic network, to provide a high level of expertise in patient-centred specialty drug management and distribution

OBJECTIVE

- To demonstrate that health case management (HCM) administered with routine care (RC) delivers better health outcomes than routine care alone

METHODS

STUDY DESIGN

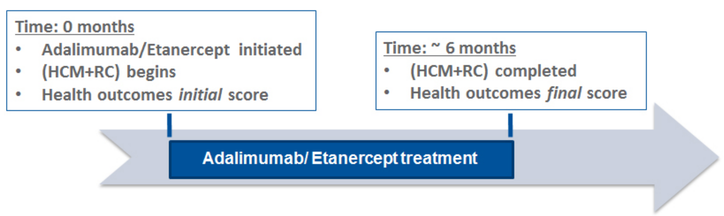
Comparison of (HCM+RC) vs. RC for two cohorts

- Rheumatoid arthritis (RA) patients on adalimumab
- Psoriatic arthritis (PsA) patients on etanercept

Data source

HCM+RC: GWL files of HCM adalimumab RA and etanercept PsA patients in HealthForward™ database

- Patient identification period: June 2012 to Dec 2016
- HCM follow-up time: 6 months



RC: Real-world observational studies of adalimumab RA and etanercept PsA Canadian patients (from published literature)

- Two relevant studies identified for RA
  - Study 1: NCT01585064
  - Study 2: NCT01117480
- One relevant study identified for PsA
  - Study 3: NCT00127842

PATIENT ELIGIBILITY

Inclusion criteria

- Age ≥ 18 years
- Diagnosis of RA (for adalimumab) and PsA (for etanercept) in the prior authorization form
- Initial health outcomes score available associated with prior authorization request
- No previous treatment with adalimumab (for RA patients) or etanercept (for PsA patients)
- Patient received HCM when treatment was initiated
- Patient completed HCM on treatment
- For PsA patients, PsA active at time of inclusion, with ≥3 swollen joints

Exclusion criteria

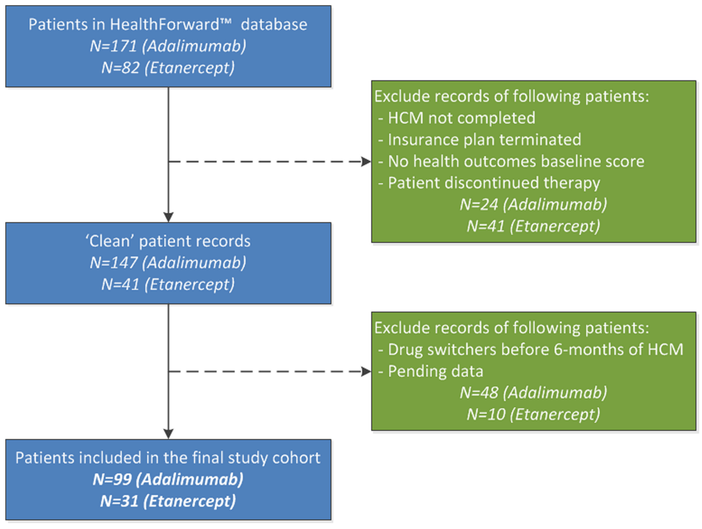
- Patients did not complete HCM (e.g. patient's insurance plan terminated while receiving HCM)
- Patients discontinued treatment while receiving HCM

STATISTICAL ANALYSIS

- Unadjusted comparisons for (HCM+RC) vs. RC patients
  - Student's t-tests for continuous variables
  - Chi-square tests for dichotomous variables

RESULTS

Figure 1. HCM patient selection results



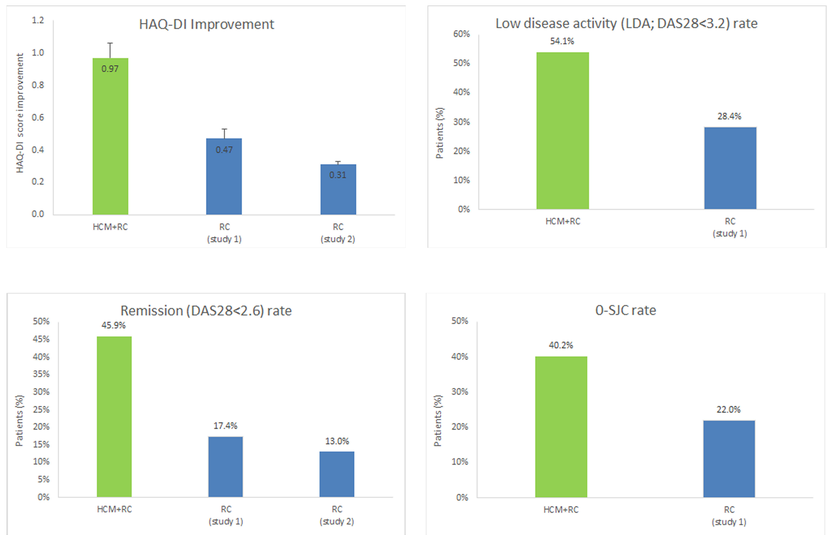
I. ADALIMUMAB RA PATIENTS

Table 1. Adalimumab RA patient characteristics

Adalimumab RA Patients	(HCM+RC) HCM Six-Month Completers (n = 99)			RC Study 1 - NCT01585064 (n = 109)			RC Study 2 - NCT01117480 (n = 985)		
		Mean	SD	Mean	SD	P-value [1]	Mean	SD	P-value [2]
Age in years		50.2	[10.9]	56.0	[12.9]	**< 0.001**	55.0	[12.8]	**< 0.001**
Number of previous DMARDS		2.6	[0.9]	2.6	[1.0]	1.000			
		n	(%)	n	(%)	P-value [1]	n	(%)	P-value [2]
Female gender		70	(70.7)	91	(83.5)	**0.028**	751	(76.2)	0.221
Previously exposed to biologic agents		28	(28.3)	18	(20.7)	**0.041**			
	Available data (N)	Mean	SD	Mean	SD	P-value [1]	Mean	SD	P-value [2]
Health outcomes initial (baseline) score									
HAQ-DI (0-3)	69	1.6	[0.6]	1.6	[0.6]	1.000	1.39	[0.72]	**0.018**
DAS28	37	5.3	[1.3]	5.7	[1.0]	0.054	5.14	[1.60]	0.548
SJC	97	9.6	[5.6]	10.6	[6.0]	0.219			

[1] P-value for (HCM+RC) vs. RC (study 1); [2] P-value for (HCM+RC) vs. RC (study 2)

Figure 2. HAQ-DI score, low disease activity rate, remission rate, and zero-swollen joint count rate after 6 months



- HCM+RC demonstrates **higher HAQ-DI score improvement** over six months compared to RC alone [0.97 vs. 0.47 (study 1), p<0.001 and 0.97 vs. 0.31 (study 2), p<0.001]
- HCM+RC demonstrates **higher rate of low disease activity** after six months compared to RC alone [54.1% vs. 28.4% (study 1), p=0.005]
- HCM+RC demonstrates **higher rate of remission** after six months compared to RC alone [45.9% vs. 17.4% (study 1), p=0.001 and 45.9% vs. 13.0% (study 2), p<0.001]
- HCM+RC demonstrates **higher rate of zero-swollen joint count** after six months compared to RC alone [40.2% vs. 22.0% (study 1), p=0.019]

II. ETANERCEPT PsA PATIENTS

Table 2. Etanercept PsA patient characteristics

Etanercept PsA Patients	(HCM+RC) HCM Six-Month Completers (n = 31)		RC Study 3 - NCT00127842 (n = 110)		
	Mean	SD	Mean	SD	P-value
Age in years	49.7	[10.6]	48.4	[10.9]	0.556
	n	(%)	n	(%)	P-value
Female gender	13	(41.9)	56	(50.9)	0.377
Age < 65 years	28	(90.3)	105	(95.5)	0.275
Previously on DMARDs	29	(93.6)	98	(89.1)	0.537
	Mean	SD	Mean	SD	P-value
Health outcomes initial (baseline) score HAQ-DI (0-3)	1.3	[0.6]	1.5	[0.6]	0.103

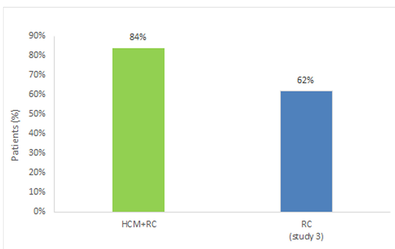


Figure 3. Percentage of patients with ≥ 0.5 point improvement in HAQ-DI score after 6 months

- HCM+RC demonstrates **higher rate of patients who achieved ≥ 0.5 point improvement in HAQ-DI score** after six months compared to RC alone [84% vs. 62% (study 3), p=0.025]

CONCLUSIONS

- HCM administered with routine care delivers significantly better improvement in RA and PsA patients' functional ability (measured by HAQ-DI) compared to routine care alone
- HCM also achieves significantly higher rate of low disease activity, remission and zero-swollen joint count in RA patients
- This analysis demonstrates the benefit of nurse led HCM in improving health outcomes over routine care alone, and helps inform future HCM prospective studies

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